PS-II

BIRLA INSTITUTE OF TECHNOLOGY AND SCIENCE

CHRONICLES

From the Desk of the Editor

Welcome to the 2nd edition of PS-II chronicles. PS – II Chronicles celebrates the spirit of the Practice School and presents the experiences of various stake holders – students, faculty and industry mentors.

This edition features over 30 articles from mentors about 500 from students and about 20 from PS faculty sharing their experience from the II Semester of 2015-2016.

This edition also carries details of PS-II allotment process.

Students who will be opting for PS -II for II Semester 2016-17 can use the current edition of the chronicles along with the previous edition to choose the PS Stations they want to apply for. The write-up provided by the students, faculty as well as mentors describes

- Brief details of the project done during PS-II
- Nature of work at various PS stations
- Working environment
- Skill set requirements
- Prior Academic preparation
- Potential benefits in terms of knowledge gain or pre-placement offers.

The objective of sharing individual student experience is so that students who will be opting for PS in the near future can make informed choices to select the stations where they would like to take up their Practice School-II.

The look of the PS-II chronicles has also been updated – we look forward to your feedback regarding the new look as well.

I would like to thank everyone who has participated in this activity- the students, the industry mentors and the faculty for sharing their experience. Thanks for making the 2nd edition a bigger and better experience.

I would also like to thank and congratulate my editorial team for a task well done.

I would be happy to receive any feedback regarding the Chronicles. Please feel free to email me at psd@goa.bits-pilani.ac.in or at anupkr@goa.bits-pilani.ac.in

K.R.Anupama

Table of Contents

PS-II Allotment Process – A Brief Overview

The following activities are majorly involved in the computerized Practice School-II allotment process followed for the students' allotment to various PS organizations.

Name of the activity

- Release of the PS-II Preference form for students [Pre-allotment details]
- Allotment of students to various organizations [Actual allotment]
- Clarifications (grievances) from students [Post-allotment issues]
- Re-allotment finalization and generation of bio-data [Post-allotment process]
- Communicating the finalized list and bio-data of students to the organizations

PRE-ALLOTMENT DETAILS

Release of the PS-II Preference form for students

There are three major steps involved in the preference form filling.

1. Station preferences
2. Accommodation preferences against each station
3. Bio-data filling

After logging onto the PSD website using the already registered username and password, you are required to fill in the above three forms.

- The PS-II preference form contains the list of the participating organizations listed in the alphabetical order along with the location of the workplace.
- Since there are more than 300 organizations listed in the preference form, students can drag and drop the organizations at the appropriate preferences.
- It is normally expected that students should save the preferences frequently. After 25 minutes, if there is no action by the user, the system will automatically log out.
- The project details, stipend details and other facilities extended by the host organization are available in the website. Details will get updated frequently. The previous semester project details are also posted in the website.

- Some organizations may not have provided project details. You may find organizations with zero stipend. That does not mean that they will not provide stipend. They might be sharing the details latter.

- In an effort to financial support students working in CSIR research labs, institute has come up with a policy of providing maximum stipend of Rs.66,000/- for the entire duration of PS-II. Stipend amount, if any provided by the host organization, will be deducted from this scholarship. Further, if the student is also in receipt of Institute merit/merit-cum-need scholarship, the total scholarship amount will not exceed the fees (semester plus summer term) for the session for the individual student. Please note that the CGPA should be greater than or equal to 7 at the time of registration in PS-II on July 4, 2016 to be eligible to receive this scholarship.

- Preferred disciplines mentioned in the project details for each organization does not mean that the organizations is not open for other disciplines. It is also to be noted the actual allotment may not necessarily strictly follow the preferred disciplines.

- The bio-data needs to be filled in properly. The bio-data consists of

    (i) Personal details,

    (ii) Current CGPA

    (iii) Course details & grades including the courses registered (automatically populated)

    (iv) Skill sets possessed

    (v) Professional interest

    (vi) Project type courses

    (vii) Co-curricular activities

    (viii) Extra-curricular activities

    (ix) Any other details (Free text field is provided)

- Once you have filled up your preference form, please save it for your reference.

- Sometimes, new stations may be added. You may need to modify your preferences accordingly.

- It is not possible to alter preferences after deadline. Please ensure that you fill the form properly.

Note:

1. *The filling of bio-data is very important as it plays an important role in the allotment process.*
2. *Students should give preference based on academic learning scope only rather than proximity to their stipend, etc.*
3. *Students must give skill sets which they are good at or else can write basic knowledge.*
4. *Detailed and meaningful bio-data is an added advantage.*
5. *If any student has any specific request to make, they can submit an application to the campus Associate Deans immediately after the submission of the preference form.*

ALLOTMENT PROCESS

The PS-II allotment of a student to a particular station depends on the following three parameters:

1. Students preference
2. CGPA and bio-data
3. Organization requirement in terms of number of students, discipline details, projects, skill sets, course requirements and CG cut off.

Algorithm used in the PS-II allotment

- Students are arranged in the descending order of CGPA irrespective of discipline and degree.
- Allotment is done per student. A student with the highest CGPA is taken up first.
- Once the student's application is taken up, system scans all the preferences of that student, till the student is able to get one of those stations as per the preferences. Usually, typical constraints could be number of students, discipline constraints, skill set constraints, CG constraints, course constraints etc.,
- The above process gets repeated till every student gets allotted a particular station.
- There are organizations where the requirements are slightly open for all the discipline students, especially in the domain of IT and Finance organizations. In such cases, the allotment of students is mostly based on the skills acquired by students in that particular domain. This allotment is known as offshoot allotment (offshoot can be typically in the area of finance or in computer science).

- If a station is going to get allotted as per offshoot process, there is an additional cutoff known as offshoot cut off, calculated on the basis of selected few courses relevant to the projects that organization offers. Offshoot points are considered to be the qualification criterion and students are still allotted on the basis of CGPA.

- For example, an organization is open for all disciplines and are looking for the expertise in finance domain. Courses corresponding to finance domain is selected and offshoot points are calculated for each student. Depending on the grades of those students, offshoot points are computed. If a student has registered for that particular course, then also, 3 credits are given. other credits are as per the grade system (A = 10; A- = 9; B = 8). Though a student with adequate CG is opting for this station, but fails to get past this offshoot score, then that student will not be considered for this station. If two students are competing for a seat in one of such organizations, both qualifying for this organization, one with higher CG and lower offshoot points than the other, then the student with high CG will be allotted to that station. Hence, the offshoot points are only the qualification criterion.

- Nevertheless, students with outstanding skill sets tailor made to a particular station can be considered for the allotment in that station.

- There are few organizations for which PSD might invite applications from students for PS-II. If any student gets selected in those organizations, he/she gets allotted to those station. If a student gets selected for multiple organizations, then student can give options appropriately in the preference form. Filling up of the preference form is compulsory for all the students including those students who are continuing in the same organization.

- Continuing students are allotted the same organization provided PSD decides to operate the station for the coming session (January -June 2017). It is always safer to fill options properly. This is not applicable for the first semester allotment.

Common doubts over the allotment

- It is expected that student should give preferences to stations on the on the basis of interest rather than worrying about other students' preferences and CGPA.

- There is always a doubt who will get allotted in the following circumstances
  - For example, an organization is looking for a mechanical engineering student with CGPA of 7.0. There are two students competing for the final seat. First student having CGPA of 8.5 has

filled this organization as his 5th preference. Second student having CGPA of 8.4 has filled this organization as his 1st preference. Who will get allotted?

- o If the first student is not getting his first four preferences, he will be allotted his 5th preference automatically because the CGPA is higher than the second student irrespective of whose preference is higher.
- o In case of students with same CGPA competing for a seat with same discipline, then students with higher preference will get allotted automatically.
- o In case of students with same CGPA with same preferences for that station, competing for a seat, then the professional interest and the technical competency of students will be taken into account before the allotment. This a typical CGPA lock case.

- Allotment is done by pooling together all the students of three Indian campuses of BITS Pilani.

- There is no normalization of CGPS across the campuses.

Possible scenarios in the allotment

Scenario 1

Usually, an organization specifies discipline wise requirement for each project. Though we try and convince them to treat the certain disciplines together (AS MENTIONED BELOW), sometimes some organizations are not interested in considering the disciplines being used interchangeably. That might be the reason why some students find the students with lower CGPA being allotted to an organization.

(i) A3/A8/AA

(ii) B3/C7

(iii) A4/AB

(iv) A7/C6

Hence, we expect students not to compare the CGPA with other disciplines, even it is a closely related domain.

Scenario 2

Some companies do mention that they are open to all disciplines. That does not mean seats are filled with only few disciplines with high CGPA students. Organization expects us to allot varied engineering branches, science and Pharmacy, especially in certain IT companies.

Scenario 3

Sometimes, students might be interested in projects other than their own domain. Though we try and accommodate them on the basis of interest to the greatest extent possible, it may not be possible in all cases, the allotment may work in favor of student preferences.

For example, an A3 student having CGPA of 8.7 who is very keen in pursuing the career in finance sector with excellent credentials in courses related to finance as well. His all top preferences are in finance domain and is qualifying for most of the finance organizations in terms of offshoot points as well as CGPA.

In the first instance, we will try our best and allot this student as per merit and preferences to the best possible extent. At the same time, if we need to allot one student with C7 tag to that organization and if seat positions are very stringent, PSD may decide to give that seat to C7 rather than "A3" student considering the overall allotment in view. Though A3 is eligible for that seat, the allotment may go in favor of C7 student considering the compelling seat positions. It is not that the opportunity is denied in spite of having merit. A student's merit can never be denied in his/her own domain. But, if you are aspiring for the domain outside your discipline, PSD cannot guarantee your allotment in spite of possessing the right skill sets.

ALLOTMENT RELEASE AND CLARIFICATION FORMS:

Once the PS-II allotment is released, students will receive an e-mail from PSD regarding the allotment. If any student is not satisfied with the allotment, he/she can always send a request in the standard clarification form (the form can be downloaded from the PSMS notice section). The clarification forms are to be sent only to a particular e-mail id: psd@pilani.bits-pilani.ac.in

- One or two days may be given to submit clarification. After that, it may not be normally possible to entertain any request from students' side expect under emergency situations.

- The decision of operating a PS station lies with PSD depending on many factors primarily from learning perspective. It may be possible that a few stations may not be operated in spite of having been listed in the preference form.
- Though division makes every effort to share the relevant information to students, if by any chance, there is any change in the requirement in terms of stipend, it is difficult to consider for the re-allotment to different station simply because of change in stipend.
- PSD tries to accommodate the students' request as much as we can. Nevertheless, it may not be possible for us to consider all the requests. Students are expected to have patience during the process of post allotment grievances. Once changes are made, automatically, it gets reflected in your portal after some time (you can login and check). It may not be possible to communicate the changes individually through e-mail.
- On the other hand, it may also not be possible to communicate to students if we are unable to make a change. Normally, the clarification changes will happen within 6-7 days after the allotment. Please check your portal for any change. Don't expect mail during grievance clarifications.
- Any change made close to the commencement date, will be intimated to you through e-mail.

BIO-DATA SHARING, FACULTY ALLOTMENT AND REGISTRATION DETAILS

- Your bio-data will be shared with the organization prior to the joining of the course.
- Though the allotment is done keeping the various projects in view, your actual allotment depends on the deep look at the bio-data by PS faculty in consultation with project mentor from host organization. Please be available on the mobile and e-mail id for any information from organization side.
- Every student will be assigned a faculty for the smooth conduct of PS-II course.
- Faculty allotment details (Name, contact number, e-mail id) will be shared with you prior to the start of PS-II course.
- The details of the registration (address, date and timings) will be shared with you at least one week in advance in the form of allotment letter.
- Normally, students are expected to possess the allotment letter at the time of registration
- PSD makes conscious effort to ensure that registration takes place at the common place for each center.

Mentor Experience

Domain- Core Engineering

Company: CRRI, New Delhi

Dr. Ravindra Kumar, Principal Scientist

Dr. Ravindra Kumar has completed his PhD (Transportation Engineering) from Edinburgh Napier University (UK) and Master's Degree (Transportation Engineering) from the University of Roorkee, India. He has been working for the last 19 years in the premier CSIR-Central Road Research Institute India, Government of India and currently he is a Principal Scientist in Transport Planning Division. He has experience as Post-Doctoral Research Fellow at the Transport Research Institute, Edinburgh. His current research area focuses on GIS Application in urban and rural road planning, sustainable transportation system, travel behavior and its impacts, evaluating and mitigating the environmental impacts, assessment of road transport on urban air quality, with a special focus on rehabilitation and resettlement planning, real-world driving cycle and vehicular emission using advanced instruments and developing emission factors based on onboard, micro simulation and chassis dynamometer. He has supervised a number of graduate and postgraduate students, besides research and consultancy research. He is a Life Member of the Indian Road Congress, and a Member of CILT UK. He has completed over 28 sponsored researches and consultancy projects for various department like World Bank, Centre of High Technology Ministry of Petroleum, Ministry of Road Transport and Highway, Ministry of Rural Development, other State Governments and Central Government. He secured more than 50 research papers in International and national journals and presented at national and international conferences. He is member of many technical committees of Government of India. His CV is published in Who's Who in the World 2012 by nomination of Marcus Who's Who in the World USA and published as distinguish national oversees awardee in Washington Bangla Radio and PIB India. He has widely travelled in many countries and studied/observed different transportation systems in the world. He is recipient of Young Scientist Award for the year 2011, award for CRRI.

Company: Grasim Industries Ltd, Nagda

Shailendra Deshlahra

I want to take this opportunity to extend my appreciation for all the hard work done by both the students Prateek Dubeyand and Shiva Chandra towards their allotted project. They showed strong dedication towards their work and reported to me on a regular basis. I found them to be very thorough with their work in terms of interacting with other engineers and operators. By virtue of their keen interest to learn, they were able to identify some of the errors in the plant and further were able to aid to their solutions. They interacted and discussed regarding their findings regularly with me and sincerely heeded to my guidance. I appreciate all the diligence and enthusiasm shown by them and would like to wish both the students best of luck and great success in the future.

Company: MBRDI, Bangalore

Umashankar

I am quite happy about the outcomes from the studies done by Swathi on the problem defined. In general, I had a good experience with the students from BITS who come with right fundamentals. Thanks for all the efforts that you put in developing the young talents and preparing them to face the real life engineering problems. I am sure we will continue having a fruitful collaboration in future with you.

Company: Vestas Technology R&D Chennai Pvt Ltd, Chennai

Mr. Pradeep Zinjade, Loads & Performance Engineering

More encouragement and guidance should be given to PS aspirant students from core engineering backgrounds so that they can choose their career relevant to their field instead of opting for software companies. Students' awareness should be increased as to how they can reap the benefits in the long term when they make relevant career choices. Communication with the HR of core companies well in advance is a must. Not only it will help the HR as well as the departments to plan in advance but also, it increases the chances of involving more students for PS in the company. As in the case of Vestas, I would recommend that such communication should be initiated in August every year instead of December, which would surely help departments to figure out their needs and come up with good number of vacancies. We look forward to continue our association with BITS PILANI for PS, as we are always looking for potential candidates. As per our past associations, most of the candidates end up getting job offers at par with the industry provided we have vacancies falling in line with their skill sets.

Domain- Economics Finance

Company: JP Morgan-CIB, Mumbai

Mr. Praveen Sharma, Executive Director at JP Morgan Chase

I have had the pleasure of working Utkarsh and Aditi as their mentor at our company from January-June 2016. During this period, they have impressed me time and again with their capacity and sincerity. They have worked on various FinTech applications here at the company demonstrating their sound creativity and technical capabilities. I discovered a natural inclination in them to excel, owing to their admirable moral conduct, exemplary team work and interest in the field. They have adapted well to the work culture and strive to perform better every day. The interns' drive and capabilities have truly been an asset for the company and we look forward to work with the next batch of interns from BITS, Pilani. I appreciate the Practice School program initiative undertaken by the college as it prepares the student for a smooth transition to the corporate world.

Company: Swiggy, Bangalore

Shailendra Singh Rana

I was looking for someone who would be able to take ownership of his/her aspect of project and deliver the items needed with minimal interference. If this person was willing suggest changes/improvements in our process, even better. Kavya V was part of my team as part of her PS 2 program and she has become a key member in the team during the course of her stay here. She has shown to be a quick learner and a responsible worker. She is now a key member of the team and is handling quite a few important aspects of the team independently. She handled the content requirements of all India stakeholders almost independently and set up and controlled the entire couponing system for Swiggy. She has also been critical in making product changes to improve on the existing system.

Company: TAS, Bangalore

Shailendra Singh Rana

We look for people with sincerity and pro-activeness. Arunabh to a large extent was able to fit into our requirements. Arunabh has helped in a number of ongoing assignments. He has been a fast learner and picked up things pretty rapidly. Arunabh has always maintained the deadlines and that's why he was able to work in different projects and different verticals within the team. He is a good listener and asks the right questions. Also his work needed minimum monitoring and quality check.

Company: Zinnov Management Consulting Pvt. Ltd, Bangalore

Vishnu BG, Senior Analyst

ZKC (Zinnov Knowledge Center) which is an integral research arm of Zinnov has engaged with lot of BITS student in the past since our inception. It has been quiet a brilliant experience the team had working with the BITSians. The inclusion of BITSians has certainly created a great value addition to the team as they provide some valuable contribution in the projects both in the form of Research and Consulting.

As a research team our main expectation is to provide valuable data to derive strategic insights for our clients. Students who have associated with our team has provided innovative ways of deriving the data and have worked along with us to come up with innovative frameworks which is equivalent to the lights of BCGs and Mckinseys. We always look for interns who just not provide the data but for an individual who do some analytics on top of it and create some potentiality such that it can go directly into our Consulting papers, BITSians have always satisfied us with this and it is quite evident when compared to the other students from various institutes. We have included students from BITS in various types of project with different team so that a collective knowledge can be shared among themselves. In the last PS we have made them engage in Consulting projects, Syndicated Reports, Platform Development, Research Process and even in Zinnov internal transformation assignments. The rapid adaptability into Zinnov's

environment has been a notable achievement from the students along with quality delivery in a short span of time. Some of the PS students who engaged with us have made significant achievements as well. They have contributed equivalent to that of a Consultant and have helped us to create great customer success stories. Students have directly worked with the client's right from the proposal to delivery and final presentation. These students have won Zinnov awards such as Spot Recognition Award and Team Excellence Award for their significant contribution and achievement.

Domain- Electrical & Electronics

Company: CEERI, Pilani

Mr. Pr Dr. Bhausaheb Botre, Scientist

With utter proud, I take this opportunity to write to you that Mr Ashish Kumar has successfully completed his project, "Design and development of adaptive pitch control". During his tenure as a trainee, Mr. Ashish displayed a great ability of imagination and a sense of creativity to find solutions to complex problems and understand the intricacies of the project. His cooperative nature helped him in functioning as an integral element of the working environment in a lab. I would be pleased to cooperate and may be contacted for further details about Mr. Ashish.

Company: National Instruments Systems (India) Pvt. Ltd, Bangalore

Govendra Gupta

Sakina worked on 3 different set of tasks for a unit verification in GPU memory subsystem, mainly oriented towards the coverage aspect. Initially she started off with driving the coverage on cmodel with our randoms, which involved root causing why a cover point is not being hit, fixing the issue in testbench or c-model with a help from verif or c-model folks, if need be & in some cases, even adding new cover points on her own – initially the coverage was around 66% and with her help we were able to push it to 99% and we did uncover some test bench issues and multiple c-model logging issues. Continuing on the coverage aspect, she also added post processing check for directed deadlock tests to hit specific complex cover points in RTL to ensure that the tests are actually hitting the intended deadlock case which uncovered issues with the test where in some cases it wasn't hitting the intended case & was a false pass. She also helped with the debugging & root causing the deadlock test failures to the specific test issues. Last thing she worked on was writing a script which reports whenever an RTL change causes rams or ram macros to change, calling out the modules & macros which have changed – this was to give a heads up that the we needed to update ram placement file as well and also to ensure that no unintended changes go in for ram sizes. Overall, she was pretty diligent with the tasks assigned to her, put in effort on her own to later ask the right questions, followed up with the team members whenever she was blocked on something. Overall she was very productive and was able to close/follow through on all tasks assigned to her. Kirti was working on one of the most important part of the project and she has completed that in time with high quality. The work Kirti has done is much appreciated by our head office architects as well.

Neha Giridhar is very fast learner. I am impressed by her way figuring out things with little help. Her research will help us to decide in adapting GPU technology.

Company: NVIDIA Graphics, Bangalore

Mr. Uday Gupta

Hariharan joined the multimedia software team with some apprehension as his primary interest before starting the internship anywhere was hardware. But I feel he took this as a challenge and over the course of his internship his apprehensions slowly faded away. Primary reason for this was probably the kind of mainstream work he was being assigned. All his assignments have and will contribute to the actual product development and deployment here at Nvidia. He was assigned several tasks here and he performed all the tasks with high quality and in the required time duration. One of the tasks of note is "developing audio framework for Integrity operating system". This is a new operating system which no one in the team had any knowledge about. He took upon himself to read about it, consult with the people who had knowledge about it and came up with a major part of the implementation. His work on this and other tasks show him to be eager to learn, self-sufficient, a good communicator and a good team player. Now that his internship is over, we would have missed his contributions, but glad that he has accepted a permanent position in the multimedia software team at Nvidia. Looking forward to having him back after his break and also to all the future valuable contributions, of which he is highly capable, he will make to the teams goals. Manoj has been working just like any other member of our team, and fully contributing and pulling his weight (of course under mentor/guidance) for the area we had asked him to work on. Manoj worked on setting up CDC (clock domain crossing) tool for multiple IPs, and in the process understood the concept, various schemes of clock domain crossings, and created constraints/waivers for the IPs, filtering down the real violations that need to be addressed. He also worked on Functional coverage – coding and then debugging/tweaking tests to hit them and later in making corresponding changes to TB for the change in DUT.

Company: Qualcomm India Pvt. Ltd, Bangalore

Paras Doshi, Lead Senior Engineer

Ayush showed tremendous speed in both learning and execution. The work that we did here with Ayush received lots of attention both here in India and in the US office. The simple reason being that this worked showed significant improvement in smart phone battery life which is a big deal in Qualcomm. Our work was filed for an US patent and was also selected as top paper submission in SW category in one of the biggest Qualcomm conference which is held yearly in San Diego. We are thrilled that he is joining back as full time and that he will deliver this solution to the market soon. Nishant worked with full dedication towards the tasks assigned to him. It helped the team to better understand 10 nm and formulate strategies based on the study done by him. Further he helped in execution of an upcoming chip which included running multiple timing runs and analyzing them.

Domain- CSIS Engineering.

Company: Amazon Development Center, Bangalore

Ajit

As a student once, I know how much an internship matters. It can be your gateway to making a very fruitful career. Industry and academia are quite different in the way they work – the expectations are different. Also it requires skills and knowledge outside of textbooks. In that regard, Amazon as a choice of organization to intern with will give you ample exposure and challenges to set the platform for students. I have seen people learn and grow as interns here. And as a person who has mentored quite a number of students, I can say with confidence that students of BITS, Pilani are a bunch of amazing people to work with. During my college days I have longed to study in one of its campuses myself and that is still justified – looking at the way the students pick up skills and knowledge. They are smart, friendly and very professional. I have seen people learn and grow as interns here. And as a person who has mentored quite a number of students, I can say with confidence that students of BITS, Pilani are a bunch of amazing people to work with. During my college days I have longed to study in one of its campuses myself and that is still justified – looking at the way the students pick up skills and knowledge. They are smart, friendly and very professional. Frankly, my experience as a mentor has been very satisfying and enriching – guiding Dwarak this semester.

Company: Blue Jeans Network India Pvt. Ltd, Bangalore

Arpit Jain, Lead Engineer

Aastha is one of the most brilliant person I have worked with. She showcased great commitment while working on native app automation and drove the project passionately, which was commendable. Her innovative approach of solving problems helped us finishing majority of Outlook add-in automation efficiently before deadline. She is definitely a valuable asset to any company.

Vinay Gopinath, Sr. Engineering Manager, PNR Bluejeans

It was a nice experience. Initially, we had to teach them about overall product of the Bluejeans. They picked up the basics in a month or so, after which they got started with their project. It was a learning experience for us as the interns got in their new ideas and views into the team. We made sure the intern learns coding and the core architecture of the product. As we know once the student learns and benefits, our company will surely make progress. The smart interns exhibited interested in learning and could deliver what was expected of them using their good programming & problem solving skills.

Sonam Jain, Senior Software Engineer

It is our pleasure having Bhavana interning in our team and is a hardworking person. She is courteous, always willing to take up the work. She knew very little about the environment and kind of work here but yet made an enormous improvement as time progressed. During her time here she has shown a great deal of enthusiasm and is always willing to learn new things. She is extremely organized and can work independently to ensure that the job is done. Finally conclude by saying that it is really a wonderful experience having her on our side and she made a significant contribution to our team.

Venkatesan Thiyagarajan, Principal Engineer

Had a great time working with Shalaka. She was assigned a long pending video quality improvement on BlueJeans Desktop clients. Shalaka was able to identify the components algorithms that needs to used for improving the quality and was able to create a sample application as a proof of concept. It was thrilling to see the sample application working and joyful learning experience for both BlueJeans and Shalaka.

Simranjit Singh, Software Engineer

Suraj is one of the most brilliant person i have worked with, having showcased great ommitment while working on the project assigned to him. He did a good job working on the API and UI automation. His project on websocket was good experience and learning for everyone in the team as no one had worked on the technology before using Nodejs. Overall it was a great experience having him in our team and he is definitely a valuable asset to any company.

Company: Bundl Technologies Private Limited (Swiggy), Bangalore

Shailendra Singh Rana

I was looking for someone who would be able to take ownership of his/her aspect of project and deliver the items needed with minimal interference. If this person was willing suggest changes/improvements in our process, even better. Kavya V was part of my team as part of her PS 2 program and she has become a key member in the team during the course of her stay here. She has shown to be a quick learner and a responsible worker. She is now a key member of the team and is handling quite a few important aspects of the team independently. She handled the content requirements of all India stakeholders almost independently and set up and controlled the entire couponing system for Swiggy. She has also been critical in making product changes to improve on the existing system.

Manisha Dhingra

There were delay in some of the project deliverables due to the learning time required to get familiar with the newer technologies like Django used in Swiggy. This delay could have been avoided if the student had already worked on mini projects on recent technologies like Django, Node.js. Qualities expected from an intern are given below: Learning new technologies fast, Able to collaborate with the team while working on deliverables, Completing the task with high quality, Able to communicate the issues to the team and working towards resolving them Quickly. The intern worked with the team very well - Attended daily scrum meeting with team; discussed the design of features and problems with the team whenever there were blocking issues. Learning opportunities were given in the following technologies: Java, spring, Hibernate, Django, python, HTML, Javascript, Redis and RabbitMQ. Of all the features delivered, there is one feature which is most important to us namely the background reporting system. This was developed as a very generic framework and can be used for new reports and new tasks easily. One of the report generated from this system is the cash report. This report is getting generated every day without any issues in production – The finance team uses this report heavily. This is one of the critical deliverables from the intern. The student already had good experience and knowledge in Java and was a hardworking person.

Company: Cisco Systems (India) Pvt, Bangalore

Suresh Shetty, Sr Manager, Advanced Services

Hargun Singh Oberoi has taken up three projects, with three different business units and has basically added breadth to our organization. Hargun Singh Oberoi has taken up three projects, with three different business units and has basically added breadth to our organization. His abilities to reach out to the crowd are also outstanding. Recently he had conducted a session for more than 100 employees from Advanced Services and all of us had a wonderful time. The session lasted for two hours but I never had to look at my watch. I am looking to have Hargun be a significant part of the team and become an asset to our organization. His ability to interact, speak and take leadership is what is most outstanding.

Sudarshan Kumar, Software Engineer

Divyanshu is in all very hardworking and smart individual. It has been a fun journey with him as an intern under him. He worked quite well on the project allotted to him as expected out of an BITS intern. He knowledge of the subject is vast and he has a charm of adding value to the team and making workplace a fun place. The qualities look out in an intern are that he should ask as many question as he can, never sit idle, keep coming to us with new problems that he may face related/notrelated to project and Divyanshu possesses all of these qualities. In all it has been great working with and I hope to work with him in future. Ananth was always cheerful and enthusiastic whenever I met him. We have had numerous discussions on both academic and non-academic topics. The discussions were always something that I looked forward to. As an intern he was expected to learn some of the concepts that would be useful for understanding what the team works on as a whole. All the interns had to deal with new technologies and they had to understand a lot of new networking terminologies. He managed to work in good synchronization with the

other interns in the team and they were a cheerful lot. They came to us in case of any questions. The integration has been seamless and the guys have been outstanding with their work.

Yogesh Sharma

It has been a pleasure to associate with Rishabh. He has been an integral part of the group for the last 5 months. He blended in Cisco culture seamlessly and has been receptive to any suggestions/feedback. He smoothly adapted to the development process at Cisco, and learnt the process effortlessly. I found him to be very enthusiastic and cheerful about his work right from the beginning of his internship. He was very responsive and punctual about his work, and made it appear as if he has been in the system for long. I found him to be very smart and hardworking, who did not shy away if putting in extra efforts were needed. He has produced unmatched quality output and has made very apt suggestions, with prototypes, which has helped the program. I have found him to have a keen eye for details, who would ask inquisitive questions to seek clarity on a requirement and produce more than what was asked for. A recent instance was on the IPv6 project, where he found issues within absolute corner cases even after the project delivery and fixed them without anyone's help. During his internship tenure at Cisco, he worked on two projects, viz. ESON IPv6 Control Plane support and Virtual Key Server. These two projects involve working on the proprietary technologies. One not only has to learn the existing technology and implementation, and at the same time make inroads on where the assigned work would be added to make the project work. He exhibited great analytical and logical abilities, and managed to work through the complexities of the task and deliver the tasks. He displayed great team skills and communicated effectively with the management and the team. It is remarkable to see someone showcase such a calm head and maturity at this young age, while managing expectations of the management when the project is visible to higher management with constant tracking. I am confident that he will continue to impress the management where he will choose to work; however I would love to see him come back and collaborate with people at Cisco to produce remarkable products/solutions. I wish him well for his bright future.

Swetha Bhandari, Technical Leader Engineering

Sagar is agile, highly motivated and very focused. Sagar joined my team as part of the In-band OAM techfund project. We were looking for someone with Java application development expertise to contribute towards the orchestration and controller aspect of the project. Sagar fit in perfectly. As soon as Sagar joined the team he had to jump into a demo bring up, that had very short deadline for a customer event. He ramped up very quickly and delivered what was needed that helped us successfully demonstrate the project at a large customer event. He has continued to learn and understand all the aspects of the projects since then. He has learnt and built expertise on Honeycomb and Open day light open source projects along with understanding the process for contributing to open source. We are working towards making his contributions to the project public before the internship completes, hope to see him contribute and build a niche for himself in the open source world. Sagar is very enthusiastic and is a very good team player. He doesn't stop till he gets things done and is always ready to help other members of the team. It has been a pleasure to work with him, listen to his ideas and debate with him.

Paramananda Ponnaiyan

Kiran is a quick learner. We started him off with a ground up development of a Tool to rampup new employees. He had to learn 2 technologies python and the django framework. He had little or no experience in either of these but in a period of 3 months we were able to make a complete, usable product, with Continuous Integration model properly setup and had a first run with actual new-hires. As I was tasked with other responsibilities, Kiran was the sole owner of this product. He is very good at coming up with ideas for product features, debug issues quickly, and also take a design and implement it, he is also good at thinking through designs on his own and coming up with the development challenges. By the end of the project he also started to look at design aspects. In tasks that required him to reach out, he was able to do so with ease. He mingled well with the team and even gave a short chalk talk on the project. We had a number of technical chalk talks during the project and he was able to communicate his doubts and alternative ideas confidently. I feel some knowledge of how to write good code is essential for a career in software engineering. Although Kiran learnt this the hard way through code-reviews and bugs, the general rules like small functions, indentation, avoiding too many if-else conditions, adding debuggability etc could be taught in college. This is one way you could improve your college syllabus.

Shrikanth Seshadri, Principal Engineer

Apoorva has been a tremendous asset to our team that works on building next generation Cisco products for Data Centers. Over the last few months, she worked on Analytics and Machine Learning algorithms and techniques to solve many problems that traditionally didn't have any good solution or took very long to solve. She built a framework that helped analyzing and automating many tasks that would traditionally take many man-hours or even days to perform which can now be done in minutes. She learnt and used many open source technologies like ELK Stack (ElasticSearch, Logstash and Kibana), Graylog Server, Ubuntu, Virtualization, etc. She had to learn a lot of new technologies in record time (python, Ruby, Java, etc.) in record time to get the job done and spent many late nights building this framework. She interacted with many team members, collected their requirements, looked at customer issues and addressed their pain points using the analytics framework. She provided many demos and usage information about the framework to the wider team to evangelize its usage. She met and exceeded the expectations that we have for internship. She is absolutely cheerful and brings in a lot of energy into the team. Togis has been a tremendous asset to our team that works on building next generation Cisco products for Data Centers. Over the last few months, he worked on Analytics and Machine Learning algorithms and techniques to solve many problems that traditionally didn't have any good solution or took very long to solve. Particularly, he has been focusing on building a framework that would combine testing and debugging into a unique solution that helps leveraging the best of both and helps in completely automating the debugging that is done on Cisco devices. Today, it takes many hours or days or even weeks to debug complex problems that would be punted between different teams to eventually find the right owner. This framework uses Yang models, builds intelligent augmentation over it, uses Decision trees and relates them based on the dependency of various modules. We can use this tool for both real time as well as offline debugging. The same tool can also be used for auto generating test cases based on a simple GUI that would tremendously accelerate our productivity. Many Machine Learning algorithms were explored and the team is trying to utilize them based on their performance and applicability. This is absolutely cutting edge technology and we're very excited with the results.

Sarat Pollakattu, Manager

Aarthi is one of our best interns in the group. Her commitment for a given task and her dedication towards learning new technologies are commendable. She always has a positive outlook towards things and is easily approachable by other team members. She is part of many projects such as developing a web based tool for capturing employee work-items and respective progress [or] be it a new IP based protocol to discover a new device in the network for an upcoming Cisco tech, one thing that stands-out is her relentless efforts in delivering all of them in time and with quality. I would like to take this opportunity to thank Aarthi for all the good time with our team and wish her success ahead.

Vivasvan Shashtri, Manager

Internship is like 20-20 cricket, you need to be an all-rounder who can deliver in a very short time frame and under pressure. With her can do attitude, high energy and ability to quick grasp and solve business problems, Sonia was a great addition to my team. Sonia helped design an end to end pre-sales tool and also accelerated a couple of our data science projects on deal benchmarking. We will remember Sonia for not only the projects that she did for us but also the grace and ease with it was done.

Devesh Srivastava, Data Scientist

"What we look in the students when they show up for internship is the passion and talent to solve problems in a creative and collaborative manner. Getting on-board BITS student solves the talent part of the resource acquisition and in Ashwin, I did find the passion element and that in abundance. He does the work efficiently and has easily slipped into the team groupings and functions as expected of him. In his short stint here, He has successfully accomplished TCO-ROI automation and worked extensively on big Data with as much ease as a professional recruit from the market. What would stand out for Ashwin is his work ethics and dedication to solve the problems"

Domain- Biotechnology Engineering

Company: Cipla Biotec (Goa)

The overall working of the PS II is good….Students are having good perception skills. They are ready to take up any new challenging task. Good coordination between each other and good team work skills. Good Upstream and downstream process understanding. Awareness of GMP and GDP is required besides knowledge on awareness of cross functional team relationship, Team work. 2 or more students may work on single project based on the amount of work which should be communicated to the students in advance. It would be beneficial to have an orientation session before the start of the PS to the selected students; this will help them start becoming well versed with the company from their day 1 of PS II…

Company: C.S.I.R. - Central Leather Research Institute (CSIR-CLRI), Chennai

Dr. M Surianarayanan, Principal Scientist (Cell for Industrial Safety and Risk Analysis)

It is always a pleasure to share my mentoring experience with many undergraduate and masters students of BITS, Pilani. I guess I may be one of the few mentors to deal with more than 44 batches of your students, since 1994. When I look back, I feel so proud and happy... many of them are in peak in their careers both in India as well in West, especially in USA. I have worked with students from different faculties from different BITS campus; Chemical Engineering, Chemistry, Computer Science, Maths, Bio, and dual degree holders. I have also had similar opportunities to mentor students from other Universities besides my research scholars. To put it shortly, I would give first rank to BITS students for their excellent analytical ability, grasping power and understanding the assigned research problem, adapting to the professional office environment, and getting along well with other labmates and so on. I always wonder how the students from BITS (irrespective of the campus) are so independent, mature and different from other college students of the same age group. I am convinced that the curriculum, the mentoring methodology and the grading system, committed teachers and the competitive environment of the BITS campuses are responsible for shaping good students. Coming to my experience with the allocation of research problems to the students, to the best of my memory, none of them had any arguments nor unwillingness, everyone had taken it a challenge, partly or successfully completed the project. The students were good motivators for my research scholars, and were at par with them. The research problems I had allotted often required computation abilities and the students did complete the assignments well. Some of the projects allotted to the students involved visiting Industries, I have had an excellent feedback from the Industries about the students professional attitude in understanding and solving the shop floor issues.   Frankly, I had opportunities to learn a lot in turn from the students. In addition to successfully solving their problems, many students had participated in maintaining the expensive analytical equipment and devices, and extending support for anything beyond their research. Finally, I am extremely grateful to BITS for providing brilliant students to be the part of CSIR team for generating knowledge to Science & Engineering. I also thank my CSIR senior colleagues for having felicitated the flow of BITS students for PS work in CLRI and CSIR laboratories. I hope the system will continue!

Student Experience

Domain- Core Engineering

Company: Aditya Birla Science and Technology Company Pvt. Ltd., Mumbai

Pranav Utpalla (2011B2A3778P)

My PS2 station was Aditya Birla Science and Technology Company Pvt. Ltd., Mumbai. It is situated in industrial area of Navi Mumbai. It was a fantastic PS station and the overall experience was nothing less than praiseworthy. This is a state of the art research and development facility with cutting edge technology equipped laboratories, simulation packages, analytical labs. It is aptly mentioned that the company is both research as well as development center and provides learning experience both in terms of academics and product business development. Mentors are very helpful and considerate. In terms of academics, the training holds a lot of scope on significant level. One is expected to learn, work and develop new product or improvise existing ones. There are mainly two categories of research oriented projects that are undertaken: either new product development and suggesting the developed product for business purpose or projects that involves problems associated with production/industry which needs improvisation/rectification either related to Aditya Birla Group or some other client. This way, one can get a chance to work on live projects of industrial importance or could be associated with new product development project. One good thing is that under expert mentorship, one can individually work on single project as a whole and this inculcates a feeling of too much responsibility with proper support. This makes you a valuable asset for the company. Overall, the experience had been very good with a lot of memories. I developed bond with some employees which will be greatly missed. I got wide exposure in research work and its related development of products in one of the finest places that has to offer it and it enhanced my personal as well as professional life. I learnt the finer aspects of new product development and the research of new avenues for product development in corporate environment. I am thankful to PSD for providing me with such an opportunity which concluded my BITS journey on such good note.

Tanya Bansal (2012A1PS500G)

My PS-2 station was Aditya Birla Science & Technology Company Private Ltd., which is located at Taloja, Navi Mumbai. This is a corporate R&D for the Aditya Birla group. Here, I worked in the Pulp and Fibre Department for the entire duration of the PS. My project was based on Computational Fluid Dynamics of Non-Newtonian fluids. I learnt the concepts of rheology, advanced transport phenomena and got an understanding of the application of CFD in industries. Moreover, I was introduced to software's like ANSYS Fluent and CFX which are very useful for simulating the plant process models. I was able to conduct a study on flow of shear thinning polymer having temperature and shear dependent viscosity through piping networks using Fluent and suggest improvements in the current industrial process of Fibre production. This project aimed at enhancing the safety of non-isothermal flow of polymer in pipelines and to prevent

the possibility of explosions. It was a great learning experience. The knowledge I gained here prepared me for not only for higher studies but also for any future industrial work. The company is very particular about the presentation of the reports and I was asked to prepare a report with a specific format in Latex. This was another skill I acquired while working at ABSTC. I also helped the employees in lab work from time to time which was fun and informative. The labs here are very well equipped with excellent safety. I was introduced to several safety measures and precautions to be taken while working in lab which is an important skill. We had fire drills and safety meetings quite frequently. The work culture at ABSTC is great. The employees are warm and helpful. I played tennis and carom with many of them during lunch hours and breaks. Everyone is encouraging and passionate about work which was is an advantage of working here. I am glad that I was a part of ABSTC for the last five months and have successfully acquired skills that would benefit me in the future. I am also grateful to the PS Division for providing us with this great learning opportunity. I believe that this hands-on experience in industry helped me in making a transition from academics to the corporate world.

P Tejas Siddharth (2012A1PS417P)

During the five and a half months I spent here, I was working with the Process Engineering department, under Mr. Sagar Gulawani. The project allotted to me was titled, "A Bench Scale Study of a Carbon Black Reactor." The main objective of the project was to experimentally determine the conditions for production of particular grades of carbon black, and to try to simulate these conditions on CFD. However, the nozzle required for the experiment was still being constructed, so in the meanwhile, I was allotted a second project in which I was asked to model the operation of grinding in a ball mill, keeping in consideration the size of the grinding media. These projects together needed an understanding of reactor systems, piping systems, CFD, mechanical operations, coding in MATLAB, as well as a basic understanding of probability theory. The overall experience was very good. Not only did I learn a lot of things impossible to grasp by reading books, I also had a lot of fun doing it. Be it the experiments carried out at the pilot plant, or understanding how to prepare a PDF document using LaTeX, or learning how to use the ANSYS modules, or, finally, the occasional visits to the recreation centre, it was a very fun experience.

Company: Central Road Research Institute, New Delhi

Anurag Goyal (2012A2PS311P)

The skill set required for the project were – in depth knowledge of Transportation and Environmental Engineering, hands on experience on MS Excel ,sound reasoning skills , good social as well as interpersonal skills and good communication skills. When it comes to technical knowledge, we acquired it in college. But when it comes to other skill sets, most of these come natural to us from our previous experiences and hardships in life. The overall experience at CRRI was pretty good. Not only we got a chance to improve our knowledge base (technically), but we succeeded in learning major skills such as: interpersonal skills, communication skills, punctuality, dedication, diligence and team work. As far as tools and techniques are

concerned, I learnt a lot working on MS Excel and MS Word as my major work revolved around it. To sum it up, it was an enthralling experience training at CRRI that helped us come out as a better person.

Anvit Kumar Mittal (2012A2PS443P)

The project is an attempt to estimate the adverse impact of keeping vehicles switched on while idling at signalized intersections. T. The primary skills required for the project were analytical skills that every bitsian possess. I had to learn a new software named EPA MOVES 2014, which was not as tough despite limited learning resources available on the internet. Apart from learning the new software, I learned a lot about the professional world. Moreover, how a research project is carried out and how the different aspects are approached. The six month period helped me learn a lot how patience n perseverance helps a lot while carrying out a research work. Results are not obtained instantaneously which can be frustrating at times. Coming right out of college in a professional world, it is not easy to befriend fellow colleagues at office. It was a great experience socializing in a professional atmosphere. Overall, it has been a great learning experience at CRRI, not only in terms of knowledge about the subjects but also the professional behavior.

Company: Century Rayon, Mumbai

Khyati Agarwal (2011B1A1718H)

Two projects were given to the students jointly. The first project was in the Continuous Spun Yarn department. A defect in the yarn the company makes is called "jet-hairy". The project was about finding how the jet-hairy problem is caused. The problem if solved would greatly reduce their wastage and therefore reduce production costs. The second project was about the reduction of carbon disulphide and hydrogen sulphide load on the chimneys of the Tyre Cord plant. With the government's increasing strictness about environmental norms, it is imperative that the gases released are either converted to a non-environmental hazard form and then released to the ecosystem, or they are recovered and recycled, or they are converted to a saleable product. All of the above had to be done in a way which is economically feasible. The first project involved knowledge of the kinetics and the types of reactors and their equations. Also it involved great deal of field work and deductions through observations. The entire process of viscose and yarn formation was understood and learnt. The second project involved the literature review about capturing the exhaust gases and the varied ways in which they are treated. Certain innovative measures and trials were taken on our part. In the first project, possible causes of jet-hairy were isolated. In the second project, about a percent of carbon disulphide was recovered.

Company: Development Consultants Pvt. Ltd. (DCPL), Mumbai

Akshay Bura (2014H143016H)

The project we got involved was in the analysis and design of live projects for Reliance Jamnagar Thermal power plant project. This project included steel structures like STG building (Steam Turbine Generator) and Piperacks and also concrete structures like Electrical Control building. We were also given other projects like Chemical storage sheds and Crane Girder for other ongoing projects. We have learnt the design procedures adopted for the analysis and designing of structures like beams, columns, bracings, purlins, roof truss etc. The designing is done as per Indian Standard codes for concrete and Steel. We also got a complete idea on technical issues to be considered while designing structures and preparing drawings. These projects also gave a complete idea on technical issues to be considered while designing structures and preparing drawings. The actual involvement in the real time projects made us aware of the practical difficulties that arise during construction in industrial sites. The codal provisions of industrial structures and limitations of codes in designing were identified. The basic principles and theoretical aspects of Design of RCC & Steel courses were implemented in live projects. The structures were also designed for dynamic cases like wind load and seismic load. The industrial structures were generally modelled and designed in STAAD. Pro. The structure was first modelled, then member properties and support conditions were assigned. The loads were applied on the structure in accordance with IS 875 and IS 1893. The design parameters were then set and the structure was analysed. The members were designed using relevant excel spreadsheets. When any member of the structure fails or when the deflection is more than the allowable limit specified in the relevant code, the member properties were changed and the structure was analyzed again. STAAD. Pro is widely used software in all the projects. It has a very simple interface and easy commands. MS Excel is also used to do manual calculations or to check the results given by STAAD. Pro. I am familiar with both softwares. Talking about the exposure gained here, I was exposed to corporate consultancy with civil, mechanical and electrical departments. I've learnt the importance of co-ordination of work among these departments. My experience here, improved both my designing and software skills. Though I am familiar with Staad pro and M. Excel, I have improved my knowledge on these softwares in DCPL. I've learnt about design parameters for any type of structure in Staad. Pro. I've learnt to use, debug and write VBA (Visual Basic) coding in MS Excel. I have designed complete structures using STAAD. Pro and Excel design spreadsheets. This PS station gave me an opportunity to design a complete steel structure, from a practical point of view.

R.Deepthi Reddy (2014H143055P)

Analysis and design procedures for different components of 90 MW Coal based Captive power plant are discussed in the project given to us. The project includes, the design procedures adopted for the analysis and designing of structures like isolated foundation, pedestal, design of Column bases, the complete designing of a staircase, design of floor beams, crane girder design and connection design. The designing is done as per Indian Standard Codes for Concrete and Steel Structures. This project also gives a complete idea on technical issues to be considered while designing structures and preparing drawings. The actual involvement in the real time projects made us aware of the practical difficulties that arise during

construction in industrial sites. The codal provisions of industrial structures and limitations of codes in designing were identified. The basic principles and theoretical aspects of Design of RCC & Steel courses were implemented in live projects. The structures were also designed for dynamic cases like wind load and seismic load. The industrial structures were generally modeled and designed in STAAD. Pro. The structure was first modeled, then member properties and support conditions were assigned. The loads were applied on the structure in accordance with IS 875 and IS 1893. The design parameters were then set and the structure was analyzed. The members were designed using relevant excel spreadsheets. When any member of the structure fails or when the deflection is more than the allowable limit specified in the relevant code, the member properties were changed and the structure was analyzed again. STAAD. Pro is widely used software in all the projects. It has a very simple interface and easy commands. MS Excel is also used to do manual calculations or to check the results given by STAAD. Pro. I am familiar with both software's. Talking about the exposure gained here, I was exposed to corporate consultancy with civil, mechanical and electrical departments. I've learnt the importance of co-ordination of work among these departments. My experience here, improved both my designing and software skills. Though I am familiar with Staad pro and M.S Excel, I have improved my knowledge on these software's in DCPL. I've learnt about design parameters for any type of structure in Staad. Pro. I've learnt to use, debug and write VBA (Visual Basic) coding in MS Excel. I have designed complete structures using STAAD. Pro and Excel design spreadsheets. This PS station gave me an opportunity to design a complete steel structure, from a practical point of view.

Sanchit Bajaj (2012A2PS571P)

The project we got involved the analysis and design of real life steel structures like STG building (Steam Turbine Generator) and concrete structures like Canteen building and Contractor Shed. We have learnt the design procedures adopted for the analysis and designing of structures like beams, columns, bracings, purlins, roof truss etc. The designing is done as per Indian Standard Codes for Concrete and Steel. We also got a complete idea on technical issues to be considered while designing structures and preparing drawings. The designing is done as per Indian Standard Codes for Concrete and Steel Structures. This project also gives a complete idea on technical issues to be considered while designing structures and preparing drawings. The actual involvement in the real time projects made us aware of the practical difficulties that arise during construction in industrial sites. The codal provisions of industrial structures and limitations of codes in designing were identified. The basic principles and theoretical aspects of Design of RCC & Steel courses were implemented in live projects. The structures were also designed for dynamic cases like wind load and seismic load. The industrial structures were generally mode led and designed in STAAD. Pro. The structure was first modeled, then member properties and support conditions were assigned. The loads were applied on the structure in accordance with IS 875 and IS 1893. The design parameters were then set and the structure was analyzed. The members were designed using relevant excel spreadsheets. When any member of the structure fails or when the deflection is more than the allowable limit specified in the relevant code, the member properties were changed and the structure was analyzed again. STAAD. Pro is widely used software in all the projects. It has a very simple interface and easy commands. MS Excel is also used to do manual calculations or to check the results given by STAAD. Pro. I am familiar with both softwares. Talking about the exposure gained here, I was exposed to

corporate consultancy with civil, mechanical and electrical departments. I've learnt the importance of co-ordination of work among these departments. My experience here, improved both my designing and software skills. Though I am familiar with Staad pro and M.S Excel, I have improved my knowledge on these softwares in DCPL. I've learnt about design parameters for any type of structure in Staad.Pro. I've learnt to use, debug and write VBA (Visual Basic) coding in MS Excel. I have designed complete structures using STAAD. Pro and Excel design spreadsheets. This PS station gave me an opportunity to design a complete steel structure, from a practical point of view.

Sakhi Satkar (2014H143053P)

The project we got involved the analysis and design of real life steel structures like STG building (Steam Turbine Generator) and concrete structures like Canteen building and Contractor Shed. We have learnt the design procedures adopted for the analysis and designing of structures like beams, columns, bracings, purlins, roof truss etc. The designing is done as per Indian Standard codes for concrete and steel. We also got a complete idea on technical issues to be considered while designing structures and repairing drawings. The designing is done as per Indian Standard Codes for Concrete and Steel Structures. This project also gives a complete idea on technical issues to be considered while designing structures and preparing drawings. The actual involvement in the real time projects made us aware of the practical difficulties that arise during construction in industrial sites. The codal provisions of industrial structures and limitations of codes in designing were identified the basic principles and theoretical aspects of Design of RCC & Steel courses were implemented in live projects. The structures were also designed for dynamic cases like wind load and seismic load. The industrial structures were generally modelled and designed in STAAD. Pro. The structure was first modelled, then member properties and support conditions were assigned. The loads were applied on the structure in accordance with IS 875 and IS 1893. The design parameters were then set and the structure was analyzed. The members were designed using relevant excel spreadsheets. When any member of the structure fails or when the deflection is more than the allowable limit specified in the relevant code, the member properties were changed and the structure was analyzed again. STAAD. Pro is widely used software in all the projects. It has a very simple interface and easy commands. MS Excel is also used to do manual calculations or to check the results given by STAAD. Pro. I am familiar with both softwares. Talking about the exposure gained here, I was exposed to corporate consultancy with civil, mechanical and electrical departments. I've learnt the importance of co-ordination of work among these departments. My experience here, improved both my designing and software skills. Though I am familiar with Staad pro and M.S Excel, I have improved my knowledge on these softwares in DCPL. I've learnt about design parameters for any type of structure in Staad.Pro. I've learnt to use, debug and write VBA (Visual Basic) coding in MS Excel. I have designed complete structures using STAAD. Pro and Excel design spreadsheets. This PS station gave me an opportunity to design a complete steel structure, from a practical point of view.

Company: Dorsch Consult (India) Pvt. Ltd., Mumbai

Ankit Mishra (2014H144046P)

Practice School sets up the platform for the students to launch the gained educational knowledge into the Professional world, especially in the civil stream, where experience is given more weight age over knowledge. There were various small projects that I have worked on. Starting, from the project lying in its tender phase to the project which have ended and claims are to be cleared. Luckily, the projects were from all the sectors of the infrastructure. These all projects required handsome technical background with reference to the domain. Knowledge of various software like M.S project, M.S. Excel in much depth. These are very basic software which we usually study during our graduation. PS-II has really been a great experience for me. Working in a Project Management Consultancy has given me a vast experience in various sectors of management including technical work. Opening of tender- as a PMC what are points to be considered in contract; how to deal with the increase in cost; how to judge project on the overall basis. Considering the claims; how to cover various aspects with reference to the contract, official way of replying and most important not to create "self-blame" condition. The working of the PMC, various documents required, how we really go after the tender, documents to be collected and maintained, technical work to be done. The other important part that I covered is the finishing schedule and its importance. This helps a lot during the project; it helps in estimation, in checking the clients requirements; comparing the work executed to the plan. It is a very small but essential stage of planning. At last I even got the chance to study on pipeline projects and work on some technical aspects of it. The Raksha Sakti Project- Developing the whole university gave me exposure to the various phase of the infrastructure in the planning stage. And the study of smart city in the starting of this PS, gave a new direction of thinking. On a whole, this PS has really added a great value to my experience.

Company: Geometric Limited, Mumbai

Bhargav Mistry (2012A4PS064G)

Geometric Limited is a mechanical engineering based software development firm. It includes department like CAD,CAM,3DPLM,Design for Manufacturing ,feature Recognition etc.In the initial days of my PS, I was given resources and time to study C++ and various other object oriented concepts after which i was allotted a project. The project was to add a few functionalities in their already existing application. The work allotted consisted of programming in Microsoft Foundation Classes (MFC)and add other advanced functionalities (Search rule feature) in the existing application. It requires a good command over MFC and i had spend maximum amount of time coding the in code of the company if self and adding my code in various location of the company's code. This would require one to understand and debug through the existing code, depending on which one would formulate an algorithm and add code at appropriate location to add the desired functionality. After the first task was done, immediately another challenging task was allotted which more complex as compared to the previous task. The work in the station was purely based on coding demand a good command over the concept of object oriented programming, Date structures and Algorithms, Microsoft Foundation Classes and software development skills (which includes understanding and coding in the already existing code of the company).I had a very good learning experience in data structures and algorithms, MFC and other related concepts in software development.

It is strongly recommended that mechanical engineering students having prior coding experience and who are very interested in software development should consider this station for their PS-2. I personally believe that my PS-2 experience would have been much better if i would have an opportunity to work on CAD,CAM, Feature recognition and other mechanical engineering related domains since the PS station in one of the leaders in these domains.

Rajat Kumar(2011B1A4684G)

Geometric Limited is a mechanical engineering based software development firm. It is a specialist in the domain of engineering services and technologies. Its portfolio includes Product Lifecycle Management (PLM), Global Engineering Services, Embedded Systems, and Digital Technology. Geometric technology solutions (GTS) business unit develops design and manufacturing productivity tools and technologies that includes DFM Pro, CAM Works, GeomCaliper, eDrawings Publisher, Glovius, NestLib, Feature Recognition (FR), GeomDiff and 3DSearchIT.Key business verticals of this company are Aerospace, Automotive, Heavy Engineering and High-Tech. The work allotted to me was based on coding in C++ and SQL. I had to write a utility which helped to merge the geometric database with the user database. It requires a command over SQL and concepts of programming like OOPS. It required using SQL commands and using them on a C++ interface to develop the utility. I had a good learning experience related to the SQL and C++. The work was mostly related to coding and didn't have much to do with mechanical. I got to learn about the various concepts of how to handle different classes and write the utility based on functionality. The work requires a good hand on coding. So it is recommended to have a good knowledge in coding in C++, MFC, etc. The overall experience of the PS was good.

Company: Grasim Industries Ltd., Nagda

Prateek Dubey (2011B1A1486G)

My project at Grasim Industries comprised of a detailed comparative study of both the viscose divisions at Grasim. It included detailed analysis of all parameters being used starting from the pulper section i.e. the steeping section to the final filtration section of the viscose department. We started the project by covering and learning section by section working of the plant and how those sections integrate with each other to finally form commercial grade viscose. A few such observations helped us to identify some of the major problems in the plant. Through this project I was able to explore and learn the various technologies and work principle of such a large scale industry. The technical skill set required us to have a deep understanding of the viscose production process, learning the working of a DCS system as it acts as the main hub from where all the major processes of the plant are controlled, good understanding of various types of pumps as they were a major part of our study. Apart from this one should have the social skills to approach and inquire with the operators as well as top level engineers without hesitation even for the smallest of doubts. By communicating with some of the senior engineers here you can easily learn a lot both in terms of managerial as well as technical skill wise. This time period has definitely prepared me for a future in the industrial side of chemical engineering. The immediate exposure to real life problems in the industry along with responsibility attached with the work that I conducted has left me with a sense of

self-confidence and also taught me necessary work ethics. The working atmosphere is very friendly here and everyone possesses a very easy going ready to help attitude. My major achievement was when solutions and observations suggested by me were genuinely appreciated by my mentor and were further used to counter real time plant problems. The way my mentor listened to my findings and provided me with the right amount of help, not too much but just enough to set me in a path of self-discovering the solution definitely aided to my problem solving skill development. Overall it was a wonderful experience and I would definitely recommend this station to chemical and mechanical students. I am sincerely thankful to my PS-faculty Mr. Samir Kale for his continuous support and guidance throughout my internship. I would also like to thank PSD for giving me an opportunity to gain insight into this one of a kind organization.

Company: HENKEL, Mumbai

Chiradeep D (2012A4PS223H)

At Henkel I got the exposure of how things work in an MNC. The next thing I learnt here is working in cross functional teams, here we have to work simultaneously with many other teams to get the work done which is a really good experience you'll also get to know many people. My project is in Supply Chain Department. Project is to make process maps for a New manufacturing plant which is going to come up near Pune. In this project I learnt how to observe each and everything in a very minute way. Overall Henkel is a very good PS station where we can learn a lot and we'll also get a lot of exposure of a company.

Kriti Sharan (2012A1PS439G)

"I am a final year student of BITS Pilani Goa Campus. My internship at Henkel has been very enriching, giving me an exposure in a variety of sectors. Primarily it has taught me the structure of a MNC and the tremendous work that goes behind it. Being a part of AI-Cteam under Siddhartha Medhi, I experienced a perfect blend of research and customer interaction. I even got the opportunity and freedom to try something different and pursue what interests me the most- android development. Overall, it turned out to be a brilliant experience and I gained a lot from it."

Vishwang Bhaskar (2012A1PS4587G)

My PS II Station was Henkel Adhesive Technologies. It is located on Palm Beach Road in Sanpada, Navi Mumbai with a beautiful view of Mumbai and the Thane creek from the building. Henkel is a renowned German company and its Indian head office is in Navi Mumbai. It deals with Adhesives, Detergents, Home Care and Beauty Care products. I was assigned work in the operations and projects department. Henkel is building India's largest Adhesives plant in Kurkumbh near Pune. The project has been named Project Ganesha and my mentor Mr. Surendra Mehra is the head of this operation. My work involved preparing and reading Piping and Instrumentation Diagrams (P&IDs), Material Safety Data Sheets (MSDS) and Cause Effect Matrices. It was a great experience and I learnt a lot about the culture and technologies in Henkel.

Main objective of my project was to ensure preparedness so that once the plant is constructed the operations of manufacturing adhesives can begin smoothly. I prepared 1500+ documents by understanding the processes in detail. I also got multiple opportunities to visit the manufacturing units at Turbhe and Koparkhairane. I was able to learn a lot from this. Overall it was a great experience. I have so many memories of the bonds I developed with my PS-mates and the employees here at Henkel which I would cherish for a long time. I got a lot of exposure which would help me greatly in both my personal and professional life. My mentor Mr. Mukundhan was an awesome person and an excellent guide and instructor. He was motivation and helped us complete our PS smoothly. I am thankful to our Practice School Department for this wonderful opportunity.

Company: Hindustan Unilever Research Centre, Bangalore

Apeksha Sanganeria (2011A5B2754H)

Knowledge of rheological properties of gels, Knowledge of structures of proteins and knowledge of chemical reactions and interactions that occur in a solution was required for this project. Reading books and various journal papers developed the Skill set. Also existence of knowledge from courses thought during college helped while working on the project. The experience at HURC was really enriching and informative. I learned a great deal from my mentors who guided and supported me through the project. I learnt how to apply my results in a new way and the planning and strategizing before the start of the project really helped me see the broader picture and how these kind of planning will help me in my future endeavors. PS II gave me an opportunity to experience the corporate world of research and gain exposure in the industry. It was an incredible opportunity to work in one of the largest corporate in the world and to make a contribution. The experiences shared by my mentors during the PS helped me grow. This research experience helped me decide for sure what are my future aspirations. We made a great headway in the project and new methods of getting a higher strength and quality gel was obtained which will be used by the company in the development of their products. Previous extraction methods were made more efficient hence saving time and costs for the company.

Company: IFB Industries, Goa

T. Lakshmi Sai Ram (2012A8PS359G)

 Domain: Integrating turbidity sensor into washing machines. The project allotted requires concepts of Instrumentation, Data Analysis and Digital Signal Processing. The project is very relevant to my discipline and area of interest. Our PS-2 instructor is very co-operative and available whenever necessary for any doubts. The company itself is very open to listening to our ideas. We as an internship students are given

access to almost all resources to facilitate our project completion. Overall experience in the company is very pleasant and challenging. Description of project: Turbidity sensors detect the amount of dirt in wash water. This dirt level is used to take decision such as whether to extend the cycle or shrink the wash time. Through this approach we will be able to save Energy consumption and water usage. Noise reduction, developing algorithm, testing and integration into micro controller is part of the project. Skill set required: Digital signal process, data analysis, instrumentation and power electronics, and software development. Some of the skills were included in the academic curriculum for E.g., Digital Signal processing, instrumentation and data analysis. Rest were learnt out of own interest. New learning: I got to apply many concepts learnt in EIIT and IIC in practice. It helped me in better understanding the concepts, and practical difficulties that we will not be able to identify in theory. I learnt many new concepts like embedded programming, PCB layout design etc.

Purighalla Venkata Naren (2011B4A8523G)

There was a lot I learnt in this semester. My mentor has been kind enough to help me with some of them. My mentor is also a BITSian, so there is a good rapport between us. The company gave me enough time to work things out in my own way, the speed I'm comfortable with. Before starting my PS, I didn't know anything about the skill set needed for my project. So this project was helpful for me.

K.R.Karthik (2011B2A8600G)

It was a very pleasant working experience. PS-2 experience has enabled us to cope with all the pressures of dealing with work life such as deadlines, scrums and so on. This has proved to be very valuable as we are about to leave college and head into the corporate world. I learnt Basic Programming Skills, Data analysis software's like Excel, R. Arduino programming.

Sai Nishanth Chowdary Modupalli (2012A3PS225H)

My PS-2 project was a full marketing strategy model to the newly developed WRP technology products by IFB Home appliances. It gave me good exposure and knowledge regarding the process of various stages of the products (like development, testing, market research etc.,) WRP technology products have been designed specifically for usage of fully automatic wash machines in erratic water supply areas. It was launched back in 2014, only for below average sales. So the product was completely revamped and the marketing strategy was started from the scratch.

T S Kiran Kumar (2011B2A8602G)

The project aims to take the first step towards Industrial Internet of things in the IFB organization, by giving the Injection Molding Machine an online platform. The project's outline is to receive data from Xbee deployed in the machine and receive over another Xbee on the Raspberry Pi. This data is crunched and processed to required parameters and the required info is stored. This info is displayed on an application for the plant administrators to observe and analyze. I learnt the basic of hardware programming

interfacing such devices with programming languages. I gained good exposure to various devices such as Raspberry Pi and its capabilities. I learnt the various fronts to the field of Internet of things and its power. I had a full time experience as pseudo Database administrator.

Company: Indian Institute of Chemical Technology, Hyderabad

T. Vaishnavi (2011B1A1738H)

I did my PS-2 with Indian Institute of Chemical technology (IICT), one of the prestigious research organizations in the country. I worked with Dr. C. Sumana, senior principal scientist who has an expertise in simulations and process optimization. My project was based on the optimization of operational parameters (temperature, pH etc.,) required for the production of lipase from the mutant strain of Candida species. To implement this project one should have experience of working with spectrophotometers, bio reactors and also an expertise in meticulous lab practices. I had some knowledge of the skills required from some our courses in the college. And also my seniors and lab partners at IICT had helped to understand the things better. I got a great opportunity to work with eminent scientists who are proficient in the area of their expertise. Also I got a chance to see and understand how scale up of any process is achieved. There are many hurdles in scaling up the process. I got a firsthand experience in tackling the issues involved. I have learned that trouble shooting is as crucial as the experiment in itself. Troubleshooting sometimes leads to us to a different outlook toward the experiment. I also got a wonderful chance of working with various large scale equipment, which was a great value addition to my knowledge.

Company: John F Welch Technology Center (GE), Bangalore

Gampa Anirudh (2011B4A4566P)

Having worked in the Global Research Department of John F Welch technology center(GE), Bangalore for the past five months has taught me a few things, the most important being there is no one problem which cannot be solved if we try to approach in a systematic and a logical way. Not only does this apply for engineering problem statements but also in real life situations. We just need to be smart enough and maintain our composure in tough situations to achieve Success. Getting to work in one of the leading research center in India which has got global recognition, I would say it is a dream comes true for someone who wants to pursue their career in design engineering. GRC is a perfect platform for someone who is interested in Design but doesn't have enough experience as is the case of an undergrad. The work culture here is amazing and a lot of flexibility is provided to you regarding giving time and space for getting acquainted with the required soft skills for the job. Also with flexibility comes responsibility and you are expected to finish your work once you start getting into the details of the project, you would be having deadlines to meet. I had to work with my mentor Mr. Souvik Math on AVL Excite Piston and Rings on the Piston Liner Assembly. He taught me on how to tackle a problem in a systematic and a meticulous way by completing one step at a time, this has not only helped me improve my technical knowledge but also enhanced my expertise on how to analyze any particular problem statement. I got to learn some new

software skills which I wasn't familiar while in collage like AVL Excite Piston and Rings, ANSYS Multiphysics, NX Unigraphics, I-Python which would be really useful for my future endeavours. I am glad to say that I would be continuing to work here as an FTH in GE Global Research for one more year which would guide my career in the right way. If we concentrate on how the work gets done in GE, it mostly depends on the management who believe that getting products on market which could reach the expectations is solely dependent on the idea. The employees at GE are given enough space and time to come up with such ideas which would change our perspective of the world rightly said "Imagination at work". I think the Practice School Division has done a really good job in getting students into good organizations where students taste the real world for the first time. The PS-2 program is really beneficial for the students as they can not only improve their intellectual knowledge but grow as a better human being. From my experiences I can say that when a person is more involved socially he can get the work done in a better and quicker way. This program is a perfect platform for a student for gradual transition into the professional world.

J V N Karthik (2012A4PS291P)

My Practice School station is at the John F Welch Technology Centre (GE), Bangalore where I have been working for the past four months at GE Global Research. Firstly, the flexible and dynamic work culture at GE was very pleasing and most of the employees are technology driven. My project was based on simulating the yaw system of a wind turbine in MATLAB Simulink where I learnt the basics of Control system theory and its practical implementation in Simulink. The learning curve was very steep and for the first time I realized the importance of always staying up to date and constantly learn new technologies to stay relevant in the industry. The team members were very approachable and my mentor always ensured that my approach of learning was in the right direction. I have developed a passion toward technology and mechanical design after interning here. The working atmosphere is very conducive for research and sufficient time was given to get acquainted with the new technology I was supposed to be working on. The overall experience at JFWTC was very enriching both intellectually and professionally and I would like to thank the Practice School division of BITS Pilani for giving me an opportunity to work at such a prestigious firm.

Ragamadhuri Nallam (2014H148045H)

My PS-II station is John F Welch Technology Centre (Bangalore), I have been working as a part of Heat transfer and clearances team. For past five months I worked on the Projects which were completely into Heat transfer and flow analysis .For implementation of the project, I had to learn the various software tools like PATRAN THERMAL and advanced application of ICEM and CFD. Apart from the CFD applicative software's, I got an opportunity to learn visual basic code for excel applications which would be useful in creating the user interfaces for handling the huge data in lab machinery as part of my main project assigned which was completely into heat transfer analysis of a bearing compartment in the exhaust of the engine, I got an opportunity to implement the basics of subjects like Computational Fluid Dynamics, Convective and radiation heat transfer, material science and finite element method in a live project and this experience gave me an understanding that how an academic project differ from the industrial project. As said "Engineering problems are under defined, there are many solutions, good, bad and indifferent, the art is to arrive at a good solution. This is a creative activity involving imagination, intuition and

deliberate choice." Ove Arup 20th century engineer"Got to understand the meaning of this statement and how these lines are applicative in every engineering problem by working on the tasks assigned with a bent of mind towards not arriving at a solution, but on arriving at a good solution by proper understanding of the physics of the problem and the way it is appropriately implemented in the Computational domain to replicate the original problem. Regarding the company, GE has an ability to make an engineer really productive, it is the place where we get to see the implementation of the science what we learnt in gaining our degrees in real time technology. People here in GE are highly knowledgeable, their friendly attitude and helpful nature is icing on the cake. Really glad to obtain a PPO as an Edison Engineer IN GE Aviation giving my career a Head start. I sincerely believe that the Practice School Program is directed towards providing an opportunity to students to experience the world of work, by participating in live projects in industry, Apart from the academic benefits, this experience is also helpful in gaining problem solving skills, and build team spirit, initiative, and leadership skills, which makes the eventual transition to the professional world smoother and better.

Bharat Goswami (2014H106144P)

My PS-II station is John F Welch Technology Center (Bangalore), I have been working as a part of Methods & Automation team, Power division. For the past four months, I have worked on 2 different projects related to Steam Turbine Foundation Loading Calculations Automation & Creating a new turbine in the database. For implementation of the project, I had to learn various tools like Java, Python, Unigraphics. As a part of my project assigned, I got an opportunity to implement the basics of subjects like Machine Drawing, Mechanics, Power Plant Engg in a live project and this experience gave me an understanding that how an academic project differ from an industrial project. Regarding the company, General Electric has an ability to make an engineer really productive, It is the place where we get to see the implementation of the science what we learnt in gaining our degrees in real time technology. People here in GE are highly knowledgeable, their friendly attitude and helpful nature is icing on the cake. I sincerely believe that the Practice School Program is directed towards providing an opportunity to students to experience the world of work, by participating in live projects in industry. Apart from the academic benefits, this experience is also helpful in gaining problem solving skills, build team spirit, initiative, and leadership skills, which makes the eventful transition to the professional world smoother and better.

Company: LEA Associates, New Delhi

Vinayak Devendra Malaghan (2014H1A30067P)

The skills required to implement the project were Communication, Leadership, Team Management, Personal organization , Risk Management. I acquired by looking at the project coordinator way he manages with his co-workers at the time my training. The overall experience of PS-II is to excellent. This is the phase were a student changes from education stage to professional stage. I improved in software skills, knowledge, and even new learning tools and techniques required being an engineer. I learned and improved many techniques in MS office which is the basic thing everyone must be aware of. Even I refreshed my knowledge and improved Auto Cad software, a basic software of civil engineer. I learnt using Google earth software as per the requirement of the company. In our course work of traffic engineer and

safety i just learnt the basics, however in case of actual design process detailed traffic survey was conducted for seven days (CTVC). I thought the internship course was one of the best courses I have completed in my degree. There is nothing comparable to real world experience! I enjoyed the opportunity. I was surprised at how easily I was able to find something in my field of study**,** and it definitely developed my knowledge on the subject. The Internship program was a great opportunity to gain valuable work experience in a government department. I took knowledge obtained in the classroom and applied it in the workplace. During my internship I networked with government officials and departments and was able to see how things were done in the Newfoundland Provincial Government. Although balancing an internship, other jobs, and an academic workload can be difficult at times, I am incredibly grateful that I took this course as I believe my internship to be the most educational experience of my postgraduate study. It gave me so much practical knowledge that I have never encountered anywhere else and I feel a new sense of readiness for a career after my academic study. On the whole, I very much enjoyed this course and **I** walk away from it a better student.

Akash Verma (2014H144047P)

The project required a basic knowledge of transportation engineering which we have studied in our course structure. I acquire those skills by my concerned faculty and mentor at PS station. The internship offered me the opportunity to essentially customize my placement in order to gain valuable workexperience in my areas of interest. The internship offered me the opportunity to essentially customize my placement in order to gain valuable work experience in my areas of interest. I would recommend the internship course to students who are advanced enough in their degree programs that they possess specific interest areas in civil engineering where they would like to gain more specialized knowledge or eventually start a career. From my time as an intern**,** I gained knowledge, contacts, experience, and most importantly confidence in my abilities as a student and as a valuable member of the workforce. The program provided me with valuable hands-on work experience, as well as the chance to apply the knowledge and skills that I had acquired while studying civil engineering. During internship i have learned how to operate Global Position System (G.P.S) on site it was a great experience for me. Internship helped me to improve M.S office and i have learned many things on site related to work on pavement and highway geometrics which will be helpful for me in future. Site experience helps a lot to learn how to tackle the live situation of work. This program is designed to provide students from diverse backgrounds the opportunity to work in a professional position while building the career. The internship has three primary components: hands on experience, educational and professional development and mentorship. So, it provided a great on job experience.

Company: Mercedes Benz Research & Development, Bangalore

Harvish Kamlesh Sonar (2012A4PS079P)

The five months I have been working in Mercedes Benz Research & Development, Bangalore have been an amazing experience for me. Here I got an opportunity to expand my skill set, which is one of the key roles of Practice School in a student's curriculum. As a Mechanical Engineering student, I was allotted project in the CAE department. There I was inducted into Trucks Power train team. I took up the project

related to developing tools for working with the CAE software and solvers. While doing this project, I understood the importance of having a basic knowledge of computer programming for a mechanical engineer, or any engineer for that matter. Most of the CAE software and solvers rely heavily on computers. There is a lot of scope of automating these processes which are to be done manually. The FEA solvers require text commands as inputs. A computer program can write these commands on the engineer's part, requiring minimum inputs. Even processes like meshing a component include some redundant part which can be easily automated using scripts. I had basic background of C programming from my +2 and college courses. Also my mentor provided me with study materials which were helpful in my learning. With the help of my colleagues and my mentor, I was able to successfully develop GUI tools for my team. Apart from the technical training, I also got to know much about the company. I also learned some valuable life skills from my colleagues and my supervisors. My manager was an inspiration to me. He always provided me with valuable feedback and suggestions to improve my performance. All the employees were very helpful and friendly. The work-environment was also very good. There were also various Team-Building events, where the employees of CAE department meet for one day and take part in some fun stuff. So finally I would say that my overall experience at MBRDI was great. I learned many new things and it gave a good head start to my career in this industry.

Murali Krishnan R (2012A4PS690G)

MBRDI is one of the most touted core PS-II stations in the Mechanical Engineering disciplines and in all honesty the characterization is completely justifiable. MBRDI grooms students not only in their technical skills but also helps them understand an industrial team dynamics and inter & intra personal relationships, which has become indispensable for an aspiring technocrat. The support and encouragement the students from BITS-Pilani get in the teams is without any restraint, having no restrictions on the amount of Software support help and knowledge transfer from experiences engineers a student can avail within the organization. Students get to interact with international industry specialists and in all probability get a chance to work with some of the best designers and engineers in the automotive industry in the world. Students from BITS-Pilani are selected into the CAE Department of MBRDI, one of their core competency center and business interest in India. I was assigned to the Power Train Structures team. This team deals with the design and modifications of the hot components of an engine. Consequentially the team specializes in Thermo-Mechanical Fatigue (TMF) analysis and is responsible for the method development in TMF analysis for Daimler AG. I was tasked with developing a new method to better predict the failure in bolt thread region in the hot components of the engine. Through the course of the method development I got the rare opportunity to learn and develop competence in robust and industry standard pre-processors, FE solvers and post-processors. The project deepened my understanding of Thermo-Mechanical fatigue problems but widened my knowledge in FE Methods. Apart from the rigorous technical training, MBRDI presents the students with a unique opportunity to work with International counterparts. My team made sure to make my interaction with German counterparts were free of all hassle. The weekly team meetings and project reviews made me understand the strict quality control procedures followed by Daimler AG. I would like to conclude by saying that, MBRDI would be an excellent organization not only to polish your technical & social etiquettes to be followed in the corporate world, but also to give you that fine tuning required to excel in your career.

Swati Soni (2014H148046H)

First of all, I would like to thanks PS division to provide PS station and project that exactly matching with the area of my interest that is computational fluid dynamics. The project given by the MBRDI had required the skills of thermal engineering which gave me an opportunity to implement academic knowledge in real time applications. Before coming to the MBRDI, I was not knowing the software like star CCM+, optiSlang, Scilab but here they provide proper facility, sufficient time and technical support to learn this software. The colleague employees were very kind, supportive and knowledgeable. This experience has not just enhanced my technical knowledge but also imbibed the culture of professionalism in me. The benefits of getting PS in MBRDI are their flexible working hours, great food facilities, supportive and comfortable environment. I am really impressed from the company policies for the women employees and their concerns for women's safety. Lot of events were also organized by the company like team outing, traditional day, badminton tournament etc. Especially, for women employees there was women's day celebration, women's fun meetings. If they like your work and if there is any vacancy, then there is a good chance of getting job offer from this company as they give preference to the internees. Overall the working environment in MBRDI is very conducive for learning and research work. I would recommend this place as an option for all design, thermal & mechanical students who wants to learn new technical tools and works on practical automobile problems.

Company: National Aerospace Laboratories, Bangalore

Abeer Prateek (2012A1PS453G)

Interning at National Aerospace Laboratories was a unique and an enriching experience. Being a part of such an organization gave me an opportunity to work with some brilliant scientists and also a chance to learn about the latest technology and research. My project at Surface Engineering Division was on optimization of plasma electrolytic oxidation coating on Aluminium 6061 alloy and to evaluate it using various characterization techniques. Initially, I did an extensive literature survey in order to understand the technique, its mechanism as well as the parameters involved in order to get a good coating over the aluminium alloy. After having a thorough understanding, I began my experiments by trying different electrolyte systems, current densities, bath temperature and external additives in order to produce a coating which gave a good corrosion as well as electrical resistance. Finally, I was able to optimize the parameters involved and was able to get a coating which adhered to the predefined conditions. Through this project, I was not only able to learn about the research methodology, but also to implement it in the best possible way in a controlled environment. My mentors were very patient and helped me out in every possible way. I would highly recommend this PS station to people interested in pursuing a career in research.

Praveen K Mishra (2014H148047H)

Working at NAL as an intern is quite a unique experience. This station is best suited for those who wish to pursue higher studies or have the experience of working in a research environment. My project at CTFD department involved the characterization of eglin test case at mach no. 0.95 into 1st and 2nd order

solutions at time steps 0.005 and 0.01 for 1st order and 0.01 and 0.02 for 2nd order solutions. Overall 2nd order results are more accurate as it corresponds to 2nd order taylor series. Same was validated in my project at mach no. 0.95. though the time taken by the 2nd order solutions are much more than the 1st order solution but are more accurate also. Through the project I was introduced to the analytical and characterization techniques that I had just the theoretical knowledge. Now, I have the idea of the principle and working of these techniques which will surely help in the research field. This will really help me in my future endeavors. I would like to say that working at NAL has left me stronger both technically and professionally. This has been an experience of a life time and has definitely made me a better person.

Prince Singhal (2012A1PS501P)

Working at NAL as an intern is quite a unique experience. This station is best suited for those who wish to pursue higher studies or have the experience of working in a research environment. My project at Surface Engineering Department was on the sputtering of nanoparticles for the formation layer that has anti-reflection coatings. For this initially I prepared a pellet of Reduced Graphene Oxide that I used as a target for deposition on several substrates. The deposited layers were characterized using XPS, FESEM, Raman, UV-Vis-NIR and AFM. The results shown a deposition of RGO on the substrate despite high energy transmission from the Argon ions. This has resulted in the use of sputtering for deposition of RGO and control the thickness of the layer deposited. The absorptance of these layers shown a gradual increase with the time of deposition, which will be helpful for anti-reflection coatings. Through the project I was introduced to the analytical and characterization techniques that I had just the theoretical knowledge. Now, I have the idea of the principle and working of these techniques which will surely help in the research field. This will really help me in my future endeavors. I would like to say that working at NAL has left me stronger both technically and professionally. This has been an experience of a life time and has definitely made a better person.

Company: Skoda Auto India Pvt. Ltd, Mumbai

Abhishek Desai (2012A4PS174G)

This year began with bunch of new dreams in me as I was heading towards the fulfillment of my four year Bachelors of Technology course from BITS Goa and what best I can expect than getting a paid internship position in one of the oldest automobile maker of the world 'ŠKODA Auto'. The workplace of ŠKODA Auto is situated in Andheri East and is truly a garden of tranquility in the midst of the clamoring city of Mumbai, which was a far of spot from my home which is in Kolhapur. Be that as it may, as it is said fortunes has its own say, I got a wonderful apartment close by with another intern from the BITS Pilani campus. I was told to join the organization from 18th January, 2016 and it was not long when the big day had finally arrived. Wearing formal attire, I came in. Unlike our college where anybody has the privilege to enter the campus premises at their will, here at the entrance passage, there is a waiting room cum security check gathering. There are very strict security procedures at ŠKODA Auto India. My fellow interns and I were only permitted

to enter on the Visitor Passes with an escort, till Access Cards were finally issued. As I entered, I was guided by an escort towards a meeting lobby. At last, my project guide came and briefed me about my work. I was then shown the way to what would be my desk area for the days to come. I was given an individual PC with a personalized mail id and password for my work purposes. I was acquainted with most of the employees and they all were very friendly and professional. At ŠKODA Auto, I was working with the marketing team. My initial days were spent doing random work that was dropped off on me every now and then. I was asked to peruse few online videos, articles and papers. Topping the list of what I enjoyed about the workplace would clearly be the infrastructure, the cafeteria and the coffee machine which you could use countless times you need. The timings of the workplace were incredible by any means. Comprehensive of travelling time, I gave 9 hours of my day, i.e., usually from 9 am to 6 pm except Saturdays and Sundays. The workplace was incredible as employees were all very friendly and helpful. In this manner, my internship position with ŠKODA Auto is going great. I've made numerous friends also. I've got a wonderful opportunity to take in a considerable amount from this internship position so far: 1. Understanding Complexities of the Corporate and Marketing World Being an engineering undergrad marketing as a discipline was something totally new and it was only ŠKODA's unique 'Value Luxury' positioning that helped me grasp the best of both worlds with such an ease. 2. Developing Symbiotic RelationsBeing agreeable and developing good relations with your team are as essential as work that you do. At ŠKODA Auto, I could see that the marketing team is closely knit. That works well because of the trusting ways of the co-workers and the associates. 3. Work GentlyThough, the marketing team every once in a while confronted tight schedules and deadlines, yet they never let the work pressure get on their nerves. This is something I would love to learn.

Ashish Kaushik (2014H149251P)

This year began with bunch of new dreams as I was heading towards the fulfillment of my two year Masters of Business Administration course from BITS Pilani – Pilani Campus and what better can I expect than getting a paid internship position in one of the oldest automobile maker in the world 'ŠKODA Auto'. It was the last week of October when I learned that our college, as part of its six-month internship program called Practice School, had orchestrated internship positions for the students at ŠKODA Auto India. The workplace of ŠKODA Auto is situated in Andheri East and is truly a garden of tranquility in the midst of the clamoring city of Mumbai, which is a far off spot from my home in Delhi. Be that as it may, as it is said fortunes have their own say, I got a wonderful apartment close by with another intern from the BITS Goa campus. I was told to join the organization from 18th January, 2016 and before I knew it, the big day had finally arrived. Wearing formal attire, I came in. Unlike our college where anybody has the privilege to enter the campus premises at their will, here at the entrance passage, there is a waiting room cum security check gathering. There are very strict security procedures at ŠKODA Auto India. My fellow interns and I were only permitted to enter on the Visitor Passes with an escort, till Access Cards were finally issued. As I entered, I was guided by an escort towards a meeting lobby. At last, my project guide came and briefed me about my work. I was then shown the way to what would be my desk area for the months to come. In addition, I was given a PC with a personalized mail ID and password for work purposes. Throughout the work term, I became acquainted with most of the employees who were all very friendly and professional. At ŠKODA Auto, I worked with the Corporate Communications team. My initial days were spent doing

work that was dropped off on me every now and then. This work mainly consisted of perusing online videos, articles and papers. Topping the list of what I enjoyed about the workplace would clearly be the infrastructure, the cafeteria and the coffee machine which you could use countless times you need. The timings of the workplace were incredible by any means. Comprehensive of travelling time, I gave 9 hours of my day, i.e., usually from 9 am to 6 pm except Saturdays and Sundays. Amid lunchtime, my companions and I ate together at the cafeteria while discussing everything, with the exception of work. Also, birthdays at the company are celebrated with cakes and snacks. In this manner, my internship position with ŠKODA Auto India was a great experience. I worked on numerous projects like the VW Emission Crisis Mitigation, ŠKODA Superb Third Generation Market Introduction and Press Conference at Taj, Lands End, ŠKODA Superb Press Drive at Vivanta, Madikeri – Coorg, Make In India Week Mumbai Plant AV, Ketchum – ŠKODA Corporate Reportage, ŠKODA Conversations India – March and April 2016 Edition, ŠKODA Yeti Bhutan Press Drive and so forth. To summarize, I was fortunate enough to receive a wonderful opportunity to take in a considerable amount from this internship position at ŠKODA Auto India.

Sahil Lodha (2012ABPS815H)

Internship in Skoda Mumbai has been phenomenal. Within a course of just 5 months, it has imparted learning in domains ranging from design to after sales business in the market. Keeping apart the technical aspects, it has also provided exposure to the work culture of the industry. Meeting deadlines and having an open approach to suggestions from others' are necessary challenges in industry, and Skoda has definitely helped me overcome these. I interned in the After sales Domain with the HOD himself. There has been dramatic modification in transportation industry people use different types four wheelers for their different preferences like safety, speed, reliability, average, outlook etc. Companies are now faced with an increasing number of tactical options that must be efficiently and effectively applied to an Increasing number of product variations for the other company. Companies can outperform competition only if they can go about Winning customer by meeting & satisfying customer needs. So, customers' satisfaction after sales & before sales is become important for any particular four- wheeler company. Skoda, one of the biggest automobile players in India knows the responsibility of after-sales, word of mouth and customer satisfaction probably more than any other player. The thrust for Skoda to achieve excellence in this domain is immense and the dedication, focus, hard work and work done by the After Sales team are the evidence for the same. My work here was with the objective get in line with the after sales business and help towards making it better. The flow starts by the RASBI project. It was then followed by monitoring a Key Performance Index of the dealers through in house research and market research. This made way to develop Customer Satisfaction and KPI monitor to get all India report card and divide into various divisions to allow monitor development and problem. The business practices model also involved workshop campaign and technical analysis along with Legal cases. Oil business follow-up from the company and Star16 customers were the two most important projects of Skoda I was actively involved during my internship. Along with my team I was also actively involved in practices like structuring the dealer's hierarchy, presentation and data crunching. My final project, called Service Core Process implementation, was towards more organized way to adopt process which in indirectly increases customer satisfaction which included SCP process break down to get easy adoption of individual roles and

various other measures explained in detailed in the report followed. Unlike other big organizations, the employees here actually devote time to the interns. Working with them in this learning environment has really boosted my skill sets and made this whole PS 2 experience a delight.

Company: Structural Engineering Research Centre, Chennai

G.V.Nitin chakravarthy (2012A2PS380P)

Civil engineering structures are subjected a large variety of loads like manmade loads, ambient loads, extreme loads due to natural calamities. Accumulation of damage due to these loads may lead to even catastrophic failure at times leading to loss of lives and property. sensor networks embedded into the structures help us record the structural response and real time health monitoring. The main disadvantage is that the power consumption in the transmission of data set of huge sizes is very high. So the data need to be compressed before transmission and then the data is recovered of sight. For This purpose the novel idea of compressive sensing is used for which various effective algorithms have been formulated by the scientific community of Applied Mathematics and signal processing. In this project Various Compressive sensing algorithms have been used to successfully compress and recover a large scale structural response data of a simulated beam and the response data from a cable stayed bridge. Then these algorithms were used to identify the location, magnitude for single and multiple damages for a simply supported beam and a clamped plate. The basis of the project is Compressive sensing. Since the project consisted of a comparative study between over 15 different types of algorithms for the purpose, in depth knowledge about compressive sensing was needed as well as a good understanding of all the algorithms. The algorithms involve complex mathematics and are very challenging to get a good grasp. Using these algorithms as a base, an algorithm and a Matlab code for detection of Damage was framed. The damage detection algorithm uses various concepts such as Structural Dynamics, Finite Element Analysis, Linear Response generators. The algorithm proposed comes under the category of unsupervised learning algorithms. PS-2 experience in CSIR_SERC is very mind enriching and enjoyable experience. The opportunity to work with scientific minds of the country is really pleasing and the environment provides you with motivation to work and learn as much as you can while you can. The scientists are very reliable and are always available to you as far as you need anything clarified. Overall the working in SERC is worth the time and effort if interested in research.

Kamila Rohit Verma(2012A2PS532P)

Knowledge about the impact loads acting on a structure is very important in the fields of structural health monitoring (SHM) or damage assessment after extreme events. But often is it very difficult to directly measure the loads, so they need to be reconstructed. Compressive Sensing techniques can be used for this reconstruction purpose. There are many state of the art algorithms that implement the compressive sensing techniques. Every algorithm has its pros and cons. Our aim in this study was to identify the algorithm which best suits this purpose of Impact load identification. Using numerical Simulation of a beam acceleration response we were able to compare the different aspects of algorithm and we found

out the best algorithms. We also developed novel algorithms to identify the impact loads acting on a structure (beam and plate) using compressive sensing techniques. This project requires knowledge about dynamic of structure, finite element methods, and Compressive Sensing. This project also requires some knowledge about coding, and coding language Matlab. Programming skills acquired from learning c language are helpful and I had to learn Matlab from the video tutorials available online. I have read the basics of finite element analysis and compressive sensing from research papers available online. During my PS-II at SERC, Chennai, I have learned a lot about Professional conduct. I have gained quite some knowledge in computational mechanics, one of the most talked about field in the domain of structural engineering. Since I have used Matlab extensively in our project, I have gained through knowledge of programming in Matlab. I have dealt with large data in my project, so I have gained some Big Data analysis knowledge. I have met many researchers here and got to know more about the process of research and publishing papers. From the project we have completed we wish to publish a research paper out of our work. We have a fair chance of doing so. From our instructor at SERC, Dr. A. Ram Mohan Rao, we have learned a lot about professional behavior and I think it was our pleasure to have worked under him and learned from him.

Company: Tata Chemical Innovation Center, Pune

Mugdha Vinayak Dicholkar (2014H12007G)

My project in TATA Chemical Innovation Centre was in the department of Nutraceuticals. The project title was 'Screening of molecules through Biotechnology route'. The project involved screening and isolation of microorganisms for two different substrates from natural samples, and further characterization and experimentation for it. I was required to be well informed and experienced in microbiological techniques, molecular biological techniques. Other analytical skills and techniques I learned during my PS II workings from my mentor. The overall PS-II experience has been a very important learning chapter in my post-graduation. It has given me industrial experience of working. It gave me opportunity to experience many advanced instruments, and new techniques. This will be useful in future. PS II in TATA Chemical Innovation Centre helped me to develop my skills and personal research approach as well.

Tanvi P. Walawalkar (2014H12001G)

My project in TATA Chemical Innovation Centre (TCL) was in the field of nanobiotechnology. It was titled as 'Solubilisation of Silica by using Biological Routes'. For this I used certain strains of fungi that could degrade agricultural waste and thus produce silica nanoparticles. These nanoparticles were then to be characterized by various methods. I was required to be well informed about the chemical and physical behavior of nanoparticles which was something I had gathered knowledge from one of my previous projects. However some of the characterization methods were not by area of expertise but my mentor guided me all of these methods very smoothly. The overall PS-II experience has been a very important learning curve in my educational journey. I have always been interested in the ways of working of

industries and PS-II helped in experiencing this on a personal level. It not only helped me develop skills required in my field but also helped me develop my overall professional conduct.

Company: Tega Industries, Kolkata

Taliya Hemanth (2012ABPS451H)

Tega Industries Ltd. has been the second largest producer of mining industry equipment in the world. It has been a wonderful experience of knowing about the management system involved in the company. The amount of dedication and superior techniques of Toyota Production System have been helping the company to reduce the waste and to improve the productivity of the plant. The implementation of 5S has been drastically changing the company's attitude in quality and maintenance. It is my privilege to directly work with the higher management. I can understand the hierarchy and the work balancing done by the employees in each and every branch of the company and to understand the importance of coordination between the different departments which indeed is the key for the smooth process flow in the industry. This PS-2 program helped me a lot in carving out the best of my skills in order to suit for the company. Initial day were hard due to the language barrier but the company personal helped me with that issue. Guides have always been supportive and you get enough time to learn things that helps you in doing a project. I got a chance to work with the inventory management team which is a crucial as well as the toughest job in any company. I've seen the advantages of the store management system moving from the traditional way of management has many advantages over the former. Working on the principles of ABC and FSN have been key players in framing the skeleton of the store management system. The supply chain, which the company has been building for the past 30 years is the key for the success and wide market share in this sector. Finally the amount of exposure in terms of technical and cultural domains makes the whole PS-2 program a memorable one. Skill sets required for PS-II (Challenges Faced):Understanding of the use of excel in analysis and evaluation of the store management which is easy to customize the result according to the need of us. Understanding the practices that are involved in the store management and the importance of visual system in the maintaining command over the store operations. The main thing is the understanding the coordination amongst different departments for the smooth functioning of the company. The managerial relations with the labour who is within the company and with the suppliers are equally important. Most important is not to disturb the supply chain of the company which had been built over the decades. Implementation is the most challenging part of any project which includes the handling of labour. To do these we need to acquire certain managerial skills without which the whole exercise goes in vain. And more challenging thing is to make them understand what we were thinking in the layman language and there should be no communication barrier. To keep in check the daily progress. Learning the skill set required: The whole exercise to learn the things has been the most prioritized activity of the management. Most of the required skill sets are logical in the sense, apart from those special care has been taken to deal with learning of tools like SAP and Excel. There has been a series of orientation classes to help me understand the overall process flow in the company. Interaction sessions with the operators helped me to understand better of each process. I have been appointed a guide in learning the SAP module which would be helpful in doing my inventory analysis. I had to devote a lot of time in understanding and using the string functions in MS-Excel. Learning outcomes (Take back from PS-II):Key

understanding of the managerial philosophy and its effects on the lower levels of work chain. Brief knowledge on customs and practices in the store management. FIFO implementation protocol, dealings with various departments. Auditing the performance of a particular department. Supply chain of the company and multi-lateral negotiations with a supplier. Handy in tools like Microsoft office and SAP Logistics module. Benefit to the organization: The amount of dead inventory in the stores are identified and a detailed set of procedures have been laid to eliminate the dead inventory to the store which can save around 1.5 crore rupees to the company. And the introduction of visual system in store department reduced the down time between a process and the requisition has been easy and efficient. And certain guidelines are established for better information movement between the various departments made them easier and transparent. Achievements: Member of the CFT (core Functional Team) in the plant. Successfully calculated the amount of the dead inventory in the store. Implemented the suggestions in a short span of time i.e. within two months of period.

K.V. Narendra Mohan (2012ABPS621H)

PS2 EXPERIENCE: The five month internship with Tega industries helped me understand how a core industry works. The employees were friendly and they throw their helping hands in whichever way possible. Making the workers understand the work was a challenge as they speak in Bengali language. Apart from my project, I get to know how Tega works, its products, the different departments that cooperate with each other to give the output and the way the inventory, material inputs and workers are managed. Now, when it comes to my project, it was a learning curve wherein I started with understanding my role, the challenges I had to face, proposing the solutions and implementing them based on their feasibility. The employees here are open for suggestions and they always encouraged me to come up with new ideas and solutions. Some of them were implemented and now it's the responsibility of the company to continuously improve whatever I had started. I got a great opportunity to observe practically and implement the things that I have learnt in my engineering life. The projects allotted are actual projects and the solutions, suggestions and results that we propose definitely bring about a change in the way the company functions. Being an engineer, my suggestions were never considered unimportant. The necessary incentives, the workers required or the permissions to be taken, all of them were taken care of within minutes. That helped me to successfully implement all of my feasible solutions. I have become part of this company with the daily discussions with the employees and workers taking and providing suggestions in whatever the project is. Induction process goes on for the first ten days through which we get to understand the functions of different departments. Then the project will be assigned in a particular department according to their availability. I was assigned to mold department. The timings were 9:00 AM to 5:00 PM and the company provides the transport. Talking about the city that Kolkata is, the city of joy, provides you loads of entertainment. The accommodation provided by the company was accessible to some of the major attractions of the city. Finally, PS2 provided me the beat platform to showcase my skills and gain expertise in the core industry. It has exposed me to the competitive world and helped me mold into a successful engineer. Skillset Required: As 5S is a lean tool, taking a course on Lean Manufacturing or having prior knowledge on this topic would be sufficient. Lean manufacturing course is offered in the campus. I took that course in the first semester of my fourth year. Knowing more than basics in MS excel

will be helpful. Need to have good communication skills and some knowledge on the regional language, Bengali.

Company: TYCO International Ltd, Bangalore

Adity (2014H103020H)

Overall experience at Tyco International was amazing. I chose the company over the typical IT companies because of the compelling research work done at the Tyco Innovation Garage in the field of Computer Vision. Being interested in the field right from the college days I consider myself fortunate to get the opportunity to work on the world class problems like Object Detection and Surveillance Event Detection. During my PS term I have gained great technical knowledge in the field of Computer Vision while working on two projects. Apart from gaining technical skills, I got a better idea of corporate life, team working, and developed better communication skills. Tyco international PLC is a fire and security solutions company incorporated in Republic of Ireland, with operational headquarters in Princeton, NJ. They are the market leader in the fire and security products industry. They build the products and provide different devices that surround us and are integral part of most of the constructions today. Some of these devices are smoke detectors, sprinklers, surveillance cameras etc. I worked here as a Computer Vision Intern in the Advanced Research and Development Team of the Tyco Innovation Garage at Bangalore. My responsibilities were to explore the application of Deep Learning for Object Detection and Event Detection. My first project dealt with developing a Detector using Deep Learning for smoke detector. I had prior experience in computer vision but I was new to Deep Learning. Being a challenging field it took me a month to complete my study on neural networks and Deep Learning. Apart from reading on topic I developed demo application for hand written digit detection that used all kinds of neural networks and convolution neural network along with the best optimizations available to date. After completing literature survey I successfully developed a detector for smoke detector with great results. (99% Accuracy)I did another project in my PS that dealt with Surveillance Event Detection. I used the spatio-temporal features to develop the application. The features were provided in the form of dense trajectories and then I created a signature for each event using Fisher Vectors and successfully designed the system that detects event for one person in the frame. The experience of PS was great and I learned more than I expected in the field of advanced computer vision and deep learning with the guidance of my mentor and manager. They shared the results of my projects with the global team at Tyco. They also offered me a job which I have accepted.

Jeevan Deshpande (2014H141030H)

The overall experience at Tyco International, Bangalore, India was great. I was not just well trained technically but was also exposed to the high working standards of the company, the very flexible and optimized working condition under highly qualified and experienced employees (including top level managers). The working hours were 9hrs from Monday to Friday. They are only looking for Master students in CAD or CAE background for internship and this was the first time they have considered BITS for 6 months internship. Interns are generally expected to do CAD, CAE or Product development work in

various teams like Special Hazards, Water Mechanical, etc. I worked in Special Hazards team Design of Fire Extinguisher Cartridge Guard and was technically trained in CREO 3.0, and gained in depth knowledge of the product development cycle, snap design, injection melding. You are not expected to know any software beforehand and sufficient training is provided before your project commences and sometimes the training continues along with the project. I had weekly review meeting with my manager, which were very important for the feedback and continuous improvement of my performance. All the employees were very friendly and were ever ready to help me all the possible ways. I even had access to the weekly meetings of the whole team where my suggestions were always welcomed. I was assigned a new problem which needed a solution. The solutions were thoroughly discussed with the team so that they can be practically implemented. I was also given training in GD&T level 1 and Level 2 and Tolerance stack up analysis and, was encouraged to implement my learning from the training in the project. The company even organized Mech Talks, Earth Day, Safety week etc. which added more to the experience. So I would say this was a very huge opportunity which will not just add to your resume but also to your life and nobody should miss this.

Shubhashri Bandyopadhyay (2014H141032H)

As a design engineer, the work that was assigned was to redesign a fire extinguisher nozzle. They had difficulties regarding the operation and the looks of the nozzle. It was a project involving a lot of creativity on our part. The most interesting part was the idea generation part, where I had to balance between nice ideas forming in the blank space of the mind and the fact that it had to be practical enough to be implemented into the real world. The second aspect that I learnt here was, just how "practical" the idea needed to be. Every assumption had to be backed up by not just normal tables or textbooks, but straight from established guidelines. Every piece of data had to be taken from right place. Every part was created with thought and its entire life planned, right from manufacturing, assembly to deployment and amidst all this was the constraint of "cost". Cost was not just a constraint, it was creative force as it pushed an engineer to explore more and come up with ingenious solutions. And at the end of all this, whatever solution came up had to be strong enough to go through the list of tests recommended. Samples had to be sent outside of India for testing and there is always the necessity to get things right the first time. Third thing I learnt here was the fact that real life was a little more undetermined than a student's project. True, we were trained for this to some extent in our Masters course where we often tried finding solutions to unexplored problems. But we often came up with ideal solutions, not practical ones, in one single field, under the guidance of a teacher, who knew, to some extent, how to solve the problem. In the industry, no one is too sure of how a problem will end especially with the constraints of cost. It is sometimes, up to us, to decide the next course of action, whom to consult and to decide whether what we know and have considered, is sufficient or needs more. We are taught, as a part of curriculum, a huge set of tools without knowing which one will be useful. On the field, every small line or concept could decide if we got just a solution or a successful product. Finally, was the necessity of team work and multi-tasking. Team members, on average handled about three projects at a time amidst tight deadlines. They were supported by their other members forming this mesh. The manager and the engineers were very understanding and did all they could to make the environment comfortable. They ensured that, at the end of PSII I was a more practical, proactive version of my earlier self. PS 2 has provided me the opportunity to explore the

life of an office employee from the safe precincts of our college. I may not have a paper to show, but the experience has been priceless.

Company: vConstruct Private Limited, Pune

Aishwary Gupta (2014H144042P)

In the 5-month internship program, I worked as VDC (Virtual Design to Construction) Engineer. As of my learning experience I was involved in various projects which constitute of creating virtual models (Concrete, Reinforcement, MEP) using 2D drawings, Coordinating between the various trades like Structure with MEP, Calculation of the Quantities of various Elements of a building like Concrete & Reinforcement, Proposal Modeling (for bidding purpose), Project Admin Services. When I joined the company I was not knowing much about the software that I was using, my mentor in the various project helped me to understand and achieve the required skill to accomplish my work. In this internship I had a chance to work and explore on various software like AutoDesk Revit, Navisworks, 3Ds Max, Google Sketchup, there are few more software to work on. The work culture in the company is remarkable there is no hierarchy everyone is treated same. The work in which I am involved is in its infant phase in the Indian construction industry, this field is expected to grow immensely in the coming decade or so. To bring more life to the BIM industry is by collaborating with the knowledge of Project Management, which can be add on if this can be added as a new course in the curriculum of Infrastructure engineering students or in B.Tech itself. As far as the achievement goes during our internship period few of the project that I was involved in were highly appreciated by the client. We look forward to work efficiently and responsibly in the company.

Dhruvesh Shah (2014H144045P)

In the 5-month internship program, I worked as VDC (Virtual Design to Construction) Engineer. As of my learning experience I was involved in various projects which constitute of creating virtual models (Concrete, Reinforcement, MEP) using 2D drawings, Coordinating between the various trades like Structure with MEP, Calculation of the Quantities of various Elements of a building like Concrete & Reinforcement, Proposal Modelling (for bidding purpose), Project Admin Services. When I joined the company I was not knowing much about the software that I was using, my mentor in the various project helped me to understand and achieve the required skill to accomplish my work. In this internship I had a chance to work and explore on various software like Autodesk Revit, Navisworks, 3Ds Max, Google Sketchup, there are few more software to work on. The work culture in the company is remarkable there is no hierarchy everyone is treated same. The work in which I am involved is in its infant phase in the Indian construction industry, this field is expected to grow immensely in the coming decade or so. To bring more life to the BIM industry is by collaborating with the knowledge of Project Management, which can be add on if this can be added as a new course in the curriculum of Infrastructure engineering students or in B. Tech itself. As far as the achievement goes during our internship period few of the project that I was

involved in were highly appreciated by the client. We look forward to work efficiently and responsibly in the company.

Company: Veritas Software Private Limited

Venkatesh Gubbala (2012A7PS079H)

In the first few weeks after the practice had started, my assignment was to learn the basics and functions of the product Infoscale Access. I learned by reading manuals, clearing my doubts with the help of team members and sketching my ideas of understanding. I feel that this assignment time could be shortened by providing counseling hours from the experts in the respective fields. Nevertheless, it was a great experience to explore a great modern technology by myself. I was part of a team with primary objective of developing the web application for Solutions of Data Insights and Orchestration. I learned the prerequisites of web development like using GitHub and setting up development environment with Eclipse and so on. With first of the two assignments, I tried my hands on ExtJS, Java and other minor scripts which are required for running application. I learned the Agile too. SDIO alone out of Veritas' other products has a great potential to be worth of being a separate entity. My final assignment was to pick a module of commands and perform and introduce automation and automation scripts respectively to ensure the best functionality of the product. This assignment required us to learn the python scripting, server communications, python and Linux process debugging. We did Grey-box testing to automate interface interaction and functionality of the commands. But it is always better to do White-box testing and automate the source code. Since white-box testing puts great amount of work-load and consumes a lot of time, it is the organization's decision to do White-box. This was a very big opportunity for me to put hands on a large-scale data orchestration software. This project helped me to get an idea of overall architecture of software defined storage management application that is used for storing heterogeneous data. I had a hands-on experience of a number of scripting languages because of the product. Since many organizations in IT field collect thousands of terabytes of heterogeneous data, SDIO has a great opportunity to lead the IT industrial revolution.

Company: Vestas Technology Ltd, Chennai

Pankaj Dodla (2012A2PS452H)

There are few companies in India which welcome Masters Students for Internships. I would definitely like to thank BITS for providing such opportunity .PS stations availability depend on the need of the companies (specially for ME graduates) on a case by case basis, Nevertheless any PS station which accepts ME Graduates surely has an extensive plan of tasks appropriate and equally challenging enough. Vestas is world leader in Wind Turbine Generators (WTG). It has been in the business since 3 decades now. It is known for its expertise and knowledge in designing WTGs for the most complex scenarios. Currently it holds the record of building the biggest and most powerful WTG in the world. Starting from the day one, we were treated as full time employee. We were give good induction session and trainings to jump start our tasks. We were allotted real-life projects and were given appropriate insights wherever the situation

demanded. The team here in Vestas is very highly qualified, experienced and competent. They are highly revered in the Wind Turbine Industry in India For the whole duration of PS2, we handled different projects of varying complexities. The projects were undoubtedly challenging. Vestas adheres to Six-Sigma design process hence the internship is the most valuable achievement for any fresh M.E. graduate looking for a successful career as a Design Engineer. Of course, every organization doesn't guarantee a job offer at the beginning, but in due course of times opening do come up . In such cases Vestas definitely considers the interns provided they exhibit exceptional skill sets and reliability. Nevertheless, Internship at Vestas is surely a great Learning experience and I would undoubtedly recommend to any one any day!!.

Shashank Verma (2014H141031H)

I had a great experience in Vestas Technology, Research & Development Chennai. From the first day they have given respect as a Post-Graduate Interns, they have given us same welcome as any other employee get in the company. The induction process was very good. The working environment of the company was also very good, it's not like other companies that we cannot engage ourselves in other department but instead other teams are also friendly to talk to clarify our doubts. Our team was very technical and the knowledge they have was outstanding, even their attitude towards us was like a colleague. In my initial period of internship I received a very good knowledge of Wind Turbines, its working and many other related design aspects. The training sessions were technical and have given much learning to start with, as the projects were interesting and of our field (which we have opted in Technical Courses). Our team has helped me a lot while completing the tasks. And in the end I must thank BITS for providing this opportunity. I think this type of initiative has never been taken earlier and now as they have started to get in contact with the BITS-Alumini they must maintain this relationship with the companies. It will be very helpful for our juniors also. And I should also thank Prof. S. Raghuraman for his guidance in all aspects. As I was new in this city, Chennai, he has helped me a lot. And he has also helped in technical level also. It's been a very good experience in this company. All the best for my juniors!!

Company: VMS (Vakil Mehta Seth) Consultants Pvt. Ltd, Ahmadabad

Teja Perineni (2014H143013H)

My project area is the analysis and design procedures for industrial structures. Design procedure adopted for designing each component of the super structure (beams, columns, slabs etc) and the sub-structure (footing) have been done in detail. The designing is done as per Indian Codes for Concrete and Steel Structures. We have used STAAD Pro, STAAD RCDC, ETABS and MS-Excel for this purpose. It requires a basic knowledge of, Structural Analysis, and Design of RCC and steel structures which we have studied in our course structure. It also demanded a basic software knowledge in STAAD.PRO, AUTO CAD, ETABS, RCDC, SAFE and MS office. I acquire those skills by my concerned faculty and mentor at PS station. This PS experience gave me a thorough and in depth view of what goes on in the structural engineering field practically. It was a priceless experience and a wonderful opportunity created by the PS division to have a hands on experience in various fields of structural engineering. It gives us an opportunity to decide the

path we wish to walk upon in the professional world Interest. I would recommend the internship course to students who are advanced enough in their degree programs that they possess specific interest areas in civil engineering where they would like to gain more specialized knowledge or eventually start a career. Internship program provides interns with opportunities to develop themselves professionally, expand their technical knowledge. Interns have the opportunity to interact with staff and key stakeholders. I have mastered in the softwares like STAAD and ETABS due to this opportunity. Being a part of live ongoing projects, and brainstorming for ideas to optimize the construction time and cost definitely boosted the confidence levels, it was absolutely a great job experience.

B. Akhila (2014H143014H)

The main intent of this project is to highlight the concepts related to the analysis and design of industrial structures. It covers details about the design of various components of the building, i.e. plinth beams, beams, columns, slabs, footings and its detailing using code IS13920. It covers insight into analysis and design software such as ETABS, RCDC, and STAAD Pro and calculations and programming software MS-EXCEL. The results have been hence checked manually and submitted and the drawings have been made and submitted. The software results have been checked using static check. The details about various loadings and load combinations have been covered. A step by step procedure from reading architectural drawings to drawing structural drawings has been done. To implement the project most important skill set is attaining conceptual knowledge, understanding the structure and its load transformation from top level to ground level, reading the output results from softwares, proof checking the results and i acquire those skills from my guide and reading various books that are available in my PS- Station. Since, my academic career this is was the first time i was exposed to industry and learnt many things how to handle a project, team work, gaining knowledge, interaction with the guide helped me a lot to understand the behaviour of the structure. Softwares learnt: Staadrcdc, ETabs and mastered in staad pro and Etabs.

Company: VMS (Vakil Mehta Seth) Consultants Pvt. Ltd, Mumbai

Ankit Agarwal (2014H413056P)

Description of project: This Project provides a brief summary of approach adopted for analysis and design of multi-storied residential and commercial high rise buildings. It covers insight into analysis and design software such as ETABS, SAFE, STAAD Pro. Details about how to model different elements of the structure like beam, column and shear wall considering the various parameters like Mathematical modelling and designing. The details about various loadings and load combinations have been covered. This report discusses the analysis & design procedure adopted for the evaluation of Multi-Storey building under effect of Wind and Seismic forces using ETABS.PS2 Experience: It gave opportunity for me to apply my fundamental to the real life structural design problem. As for my learning experience, I was involved in various projects which helped me to learn different softwares like ETABS, RCDC, STAAD Pro and SAFE. This experience exposed me to the industry. In this internship, I had a chance to work and explore various codal provisions and it interpretation. The learning opportunity in the company is amazing. The VMS staff always supported us to bring out the best solution to a particular problem. As far as achievements go, during our

internship period few of the projects that I was involved in were highly appreciated by the seniors. We look forward to work efficiently and responsibly in the company.

Kudalkar Akhil Ganesh (2014H413058P)

Description of project: The orthogonal structural system consisting of beam and column arrangement is the most common structural system in use today. But this age old practice may not be the best option in terms of Efficiency, Effectiveness, Expressiveness and Environmental Sustainability. As buildings become increasingly tall it becomes imperative for structural engineers to opt for new structural systems which would meet their design criterions. The primary objective of the project is to investigate the suitability of non-routine structural patterns like Diagrids to increase the performance of tall buildings. Understanding and implementation of building codes along with knowledge of computer programs like STAAD. Pro was necessary. PS2 Experience: It gave me an opportunity to gauge myself against what is expected by the industry. This experience proved very helpful to bridge gaps I had in my fundamentals. It exposed me to a corporate environment and I could observe the conduct upheld by my seniors. I got an opportunity to learn softwares like STAAD. Pro, ETAB15, SAFE14 and RCDC. I also interacted and coordinated with draftsmen.

Ronak Nilesh Shah (2014H143054P)

First of all to start off with, PS-II is a wonderful opportunity for the passing out students to actually be in the field and experience the corporate life while studying. It is totally different at the PS-II organizations in terms of the work load, the kind of exposure outside the books and particularly at this firm I find myself really lucky to be a part of all the real time projects carried out by the organization. The scope of the work assigned lied in the analysis and design of multi-storey structures and that too RCC structures in particular. The basic attempts were to understand the process of modelling, understand the project work flow and towards the end understand design aspects of the structures. The best part of this was learning the behavior of the structures and how to ensure that the structure behaves in the desired manner. Frankly speaking one requires no skills as such as the organization had taught us from the very basic about the use of various software and the designing process from scratch. But surely to get into designing firm as this one it is highly advantageous to know the basic of the software use and should be well versed with the manual design of various structural elements in order to comprehend with the software based designing. Also knowing software such as STAAD Pro and ETABS is really advantageous the best way to acquire this skills is by self learning and practice. For this one can make tools such as playlist dedicated for software on YouTube, and by solving different problems from various books. The courses taught by the university covers almost all but still it is necessary to put in efforts from our end to learn. Well talking about learning the software it was really good experience as got a chance to have hands on many software such as ETABS, STAAD Pro, SAFE, RCDC etc.

Domain- Economics, Finance & Management

Company: ABC IT Mumbai

Shreya Mishra (2014K149265P)

The skill set that I learnt was about the important aspects of Communication with the senior most people in the Organization, about strategizing regarding the launch of such a massive Project. I also gained technical knowledge about Advanced Excel, macros and Pivot so as to perform analysis on the data received. I performed a tool analysis of all the available tools in the market. SurveyGizmo was ranked #1 and hence I chose that as the tool I would use for my Project. The tool was more advanced and user friendly as compared to the tool used last year, which got me the feedback from a Vice President that the Survey took only 6mins to finish on mobile. The Survey was made shorter and lots of questions were dropped, taking into account suggestion from CIOs and SPOCs about reducing the length of the Survey, because of which the completion rate was about 70%, meaning 70% of the entire population who took the survey completed it by answering every single question in the Survey, which is the highest rate achieved so far in the history of IT-CSAT. I worked with the Corporate Communications to get the Questionnaire re-designed to make it more user friendly and easier to comprehend. I came up with a new idea of customized promotions for Businesses so I asked CIOs for a photo of them and a quote by them about why IT-CSAT was important for them and their Business and why should their employees take the Survey. Earlier the idea was to do the same activity with all our Portfolio Leaders, but I learnt to crowd-source the idea and went to ask PLs about it. The AVP of the Company asked me to instead have the activity centered around the CIOs as that would have a greater influence. With the help of the Corporate Communications team, Banners/mailer were designed by me made from scratch with new content and new designs The one great thing about the organization is that it has people at senior most positions who recognize the merit of newcomers so accurately that he/she is entrusted with such great responsibilities inspite of being a newcomer. The exposure and the kind of work a newcomer gets to do here knows no bounds.

Company: Capital One, Bangalore

Meghna Bansal (2012A7PS054P)

My five-month internship at Capital One, Bangalore has been a great learning experience. I learnt in great depth about how the banking industry works and what it is like to be working in a research type project in Data Science I was working in the data labs division of the company and the project that I was working on was titled "Developing an approach to identify customer needs from frequent patterns of customer touch-points/interactions using machine learning techniques". This project is to enhance customer experience by determining the various needs of the customers of the company and then addressing those needs. To this affect, a sequential pattern mining is performed on various customer touch points. Identifying and understanding the various frequent sub-patterns found in customer sequences, particularly those centered around customer calls, was the basis of identifying the above needs. The project involved knowledge of theoretical Machine Learning Techniques, JAVA Coding and Python Programming. The culture at Capital One makes it a very comfortable work-place. I was given meaningful responsibility and my manager encouraged me to step up in meetings with the senior management. Since, it was a two-three member team; I was given the lead on the technical front and full independence in

developing the code. My voice held weight in meetings and hence I felt valued as an employee at Capital One. All-in-all, it was a wonderful project, team and company to work with.

Company: DB Mudra Group, Gurgaon

Krishna Kanth.S (2014H149232P)

My tenure at DDB Mudra Group, Gurgaon was an amazing 5 months. I got some real time exposure to the Marketing Industry and how business is done in the big scale in one of India's most happening and vibrant region- Delhi NCR. Over the course of the last 5 months, I have improved my command over business acumen, understood the essence of selling, marketing and branding, improved my negotiation and coordination skills and have grown as a more mature and confident person in the business fraternity. I worked on the project 'Managed Marketing Services for SAP India'. I was based out of the Gurgaon office of DDB Mudra and worked closely with the Events and Activations team and the Branding and Digital team. I also worked with the SAP Marketing team based out of SAP Office, Delhi, SAP Labs, Gurgaon and SAP Office, Mumbai. I learnt a lot dealing with some of the most experienced people in the IT and Digital Industry. Their experience, working style and implementations of ideas and tasks was a big takeaway and learning experience for me. Managed Marketing Services are designed to provide you with everything you need to create, implement, evaluate, and maintain your marketing plan. It's like getting an entire marketing department in a box. Some of the aspects we deal with in MMS are: Strategy, Content, Tools, lead generation, management and conversion, tracking and reporting and other marketing related expertise. DDB Mudra being a well know player and India's first big Marketing company- can provide excellent services and leverages on its large network and brand throughout the country. During the last 5 months, I was involved in a number of campaigns and events across the cities of Delhi and Gurgaon. I was particularly involved in the planning and implementation of the Indus Conclave 2016 held at the Leela Ambience, Gurgaon. I was involved right from the first step and to the 100th day of the actual event day. It taught me a lot in terms of planning, requirements gathering, coordination, team management, delegation of tasks and overall execution of a broad idea and thinking. I was also involved in a number of other events like the IOTX (Internet of Things) Expo, CFO Roundtable, CII Summit on Cloud 2016 and a number of Product related events of SAP at their Gurgaon office. I was also involved with the India Warehousing Show held at New Delhi.

Company: Goldman Sachs India Pvt. Ltd., Bangalore

Apoorva Prakash (2012A7PS109H)

It seems only last week I was collecting my ID from Goldman Sachs and now PS-2 has come to an end. These past 5 months have flown by and I will not forget the lessons I learnt here. I interned in the Operations Division of the firm, in the Investment Guidelines team, which is a part of Goldman Sachs Asset Management. The team monitors client guidelines after the traders have made their trades. It also ensures that the client accounts comply with the prevailing government regulations. The learning curve for the first few weeks was very steep and I was trained on the day to day function of the team. It was only after the first month, I started to work on my actual project. My project mainly involved analyzing large amounts of data on Excel and based on my analysis I had to make recommendations to the team to reduce the number of exceptions that come up on the trades made due to non-compliance of guidelines.

My analysis gave the team an insight into the areas which need to be targeted and prioritized for exception reduction. In addition to the data analysis, I also helped out with a few day to day tasks of the team. There were no special skills required to the job except for a very basic know-how of Excel. However, it is pretty helpful to do a few finance courses as it just improves the understanding of what the team is doing and how it relates to the industry as a whole. Something I learnt firsthand in PS-2 was the effect of global economic conditions on the firm. As students we only focus on the micro aspect of the firm, but it is very important to know about the macro forces at work and how the firm manages adverse market conditions. I also learnt the value of cultivating professional relationships. In today's world it is not just enough to do exemplary work but networking is also required to excel as a professional In all, it has been an enriching experience and I am thankful to PS-2 for giving me the opportunity to work with Goldman Sachs.

Rusheen Rathore (2012A1PS387P)

Goldman Sachs Bangalore offers internship roles in the Operations and Services Division. I interned in the Asset Management Department which falls under the Operations Division. Since the Bangalore office houses more than 4,000 employees, one gets exposed to a diverse group of professionals from varied educational backgrounds. The sheer size of the organization is overwhelming and yet everything is organized like clockwork. Due to compliance issues, I do not have the liberty to go into the details of my day to day work. My team dealt with benchmarks that are associated to accounts for the purpose of performance comparison. Benchmarks are generally indices that are published by companies like S&P, FTSE, MSCI, etc. Associating, maintaining and customizing these were the basic responsibilities of my team. Extensive knowledge of finance is not required to work in the operations side of Investment Banking. A few basic finance courses offered at BITS are enough to form a foundation, which can be supplemented by training received on the job. The internship program at Goldman Sachs is extremely structured. An intern is treated just like a normal employee, with regular training sessions taking place during routine work. Rather than assigning one project for the entire period of 5 months, my managers gave me a series of small projects that helped in making the process more efficient. All projects led to a significant decrease in the amount of time spent on day to day tasks. The PS-2 experience has helped me successfully transition myself from being a student to a full-time working employee. My knowledge and interest in the financial sector has risen along with the development of soft-skills that are essential in the modern office space. A rise in patience, determination and the ability to work hard are the key takeaways from this internship. The guidance provided by my mentors at the company has helped me pave the way for a successful and fruitful career.

Sanjana Teje (2012ABPS498P)

Goldman Sachs was not just an internship for me; it was an enriching and unforgettable experience. Having interned with previous organizations in the past, I was impressed with Goldman's structured 5 month program, its frequent innovative talks by senior leaders and guest lectures, and the expansive networking opportunities available to learn more about the entire organization. Being the only engineer on my floor with a major in manufacturing, I took every opportunity to learn from the diverse career paths and talented people from all backgrounds that were around me from CAs to architects and interior designers. I thrive in the dynamic working environments and something that excited me were the new challenges I faced in my project every single day. A good quote that sums up my learnings here is by

Benjamin Franklin and goes something like this, "Tell me and I forget. Teach me and I may remember. Involve me and I learn." At GS, an intern's opinion is heard as you are involved in live projects and work to meet weekly targets. You truly feel valued as the work you are doing is creating an impact. Moreover exposure to connecting and working with global teams at such an early stage of my career has given me a broad idea of how to communicate with different stakeholders and incorporate the best of all ideas and suggestions. I primarily worked in corporate strategizing using data and analytics. I began as a novice at Excel and working with large data sets. My learning curve at GS has been infinite. I know the experience I gained has opened my eyes into pursuing a career in big data and analytics while the soft skills and values I have inculcated will resonate with me lifelong. Thanks to PS II.

Company: HDFC Bank, Mumbai

Saurabh Gupta (2011B4A1642P)

Experience at HDFC Bank was very rewarding. I worked In Risk Analytics Unit of HDFC Bank. Main focus of the team is to reduce the losses that a bank incurs due to non repayment of loans. I got a chance to work on various projects in the organization mainly in the field of Risk and Cross sell campaign. I developed two wheeler application scorecard that will help the bank to filter out potential delinquent customers at application stage. This scorecard has been deployed across all branches of HDFC Bank. I also worked on Tractor scorecard after that. In campaign side I developed a model to estimate income of two wheeler applicants so that they can be offered other products as well. The best part of working at HDFC bank was, being an Indian Bank we were working in its head office and were in direct contact with senior management. Also we could see work done by us directly deployed. Projects at HDFC Bank require good knowledge of statistics and proficiency in softwares like R and SAS. We were given proper trainings by our mentors at the organization for these. During the PS II, I got experience of working on R, SAS, ANGOSS, FICO Model Builder, Aginity, SQL Developer. There is unlimited learning opportunity in the organization. Mentors and Team leads were very supportive and motivated us to find new ways in which problems can be dealt with.

Company: Hourglass Research, Mumbai

Pradhyumna Bhat (2012A3PS127G)

For the past five months, I have had the opportunity to work for a company that is unique in all aspects. My PS station, Hourglass Research works in the domain of Patent Analytics, a field that is in its nascent stage in India. Patents are an important part of any research cycle as they bridge the gap between an invention and its implementation. The biggest technology companies in the world like Google, Apple, and Samsung etc. have been successful due to the strength of their patent portfolios. A good patent portfolio could make or break a company's fortunes. Thus arises the need for services that provide consultation on different aspects of the patent process which includes patent drafting, analysis of existing patent portfolios and services like invalidity searches which are employed by companies to reduce competition. At Hourglass, we are trained to provide many of these services. As interns, we were not given a single project to focus on but were part of multiple projects that included invalidity searches, data analytics and patentability searches (to find out if an invention can be patented). The only skill set required to perform

well in these projects is to be able to learn new about new technologies using whatever resources one has. The basics learnt in college only help in reducing the time required to study the new technology. What I am truly thankful for during this period is that I was given the chance to be responsible for my own actions. The knowledge that there is no safety net really opens your mind and helps you develop the mentality and professionalism required to flourish in Industry. The management at Hourglass were the perfect mentors, giving me the right support and constantly encouraging me to expand my knowledge base. The result of all this was that I was able to be at ease in projects that dealt with technologies as varied as fluid mechanics, wireless communication and even bio informatics. The best moment at Hourglass for me, was when a project of which I was part of, received praise for its quality from one of the firm's biggest clients. This was truly a major boost to my self-confidence. To conclude, I would say that working at Hourglass would be a positive experience for any student and I thank BITS and Hourglass for giving me this opportunity to experience firsthand this Industry- Academia relationship.

Rohan Coelho (2012A8S389G)

My experience at Hourglass Research has been most enriching and eventful. The corporate environment of a company truly broadens your horizons and gives you learning which the university can't provide. I think one of the major leanings is application of learned concepts in real life and more importantly the monetary value associated with them. In the real world research's value is measured for the money it can earn a firm. My experience at the firm has been extraordinary, the support and learning system here is quite different from college. There is no pressure to learn a lot of things but more emphasis on learning a thing well. Understanding a technology perfectly is quite vital for analysing patents and their value. One is expected to adhere to strict deadlines, which don't get extended and the work which goes out has to be perfect. One cannot be complacent and full commitment is required so as to produce quality output. The field of Intellectual property is quite different and personally, I would rate this PS as one of the most unique in terms of work. Patents are not valued much in India, but this scenario is rapidly changing. In developed countries, patents are the lifeblood of universities. There is emphasis of capitalizing quality research done by patenting the same. Companies also have bigger collaborations with universities as they benefit from associations with universities who may licence or sell those patents. This is a win-win scenario as the grants and scholarships given by the companies' fuel more research. India sorely needs this system as there is very little collaboration between industry and universities. I think one of the biggest takeaways from PS is seeing the knowledge I have gained being put to use for generating value. Knowing that my contribution helps the firm to make money is very satisfying feeling. Responsibility and time management are also important skills which I got accustomed to. I would definitely recommend this PS to my peers as it gives you a healthy mix of both tech and non-technical knowledge. The work environment is great, the people are helpful and the learning is tremendous. Being a start-up you will get to work on many verticals and directly on client projects. The parties, team outstation trips and weekly entertainment sessions have been truly enjoyable and fun.

Company: J P MORGAN -CIB, Mumbai

Utkarsh Ashok Pathrabe (2012A7PS034P)

JPMorgan Chase & Co.is an American multinational banking and financial services holdingcompany headquartered in New York City. It is the largest bank in the United States and the world's sixth largest bank by total assets. It is also World's 5th Largest Public Company in 2016.The PS station is a back-office process oriented station. My team comes under 'Market and Investor Services' sub-segment of Corporate and Investment Banking segment of JPMorgan. Being a financial firm, the project I was assigned had not much to do with Finance, it was purely related to Computer Science.My project involved designing the User Interface and connecting it to the back-end infrastructure for an in-house Client On-Boarding Tool of JPMorgan. Python, a programming language and wxPython, a GUI Toolkit for Python, were mainly used for the project. All the development and deployment of the project was done using Athena, which is next generation pricing, risk management, analysis and trade management tool in JPMorgan. Athena implements a rapid development and deployment model that puts developers at the heart of the business. The internship helped me to improve my coding skills in Python, which I had learned through online courses on Coursera, while in college. It helped me to understand the various stages of Software Development that one has to go through, before the Software goes for Production. It taught me the importance of documenting every task and the issues faced while the Software is in Development Cycle. It also helped me to create a good network of colleagues and mentors that have guided me immensely on the project and also helped me in setting my career goals. The PS experience has trained me immensely in the skill set, attitude and the dedication required to work in corporate life. It has also widened my knowledge base and awareness of the work done in Investment Bank.

Aditi Gupta (2012A7PS268P)

PS-2 has encouraged me to push my boundaries both professionally and intellectually. I worked in the Foreign Exchange Markets vertical of Corporate and Investment Banking at J.P.Morgan. Despite J.P.Morgan primarily being a technology company, it heavily relies on technology to smoothen it's e-transactions. I have worked with technologies like Latency Buster Messaging (low latency architecture), FIX protocol, Python, Java, WebSphere MQ and Maven. Further being exposed to J.P.Morgan's inhouse developer tools, the work culture, working across different teams has been nothing short of a great experience.I have had the opportunity to attend different workshops and training sessions held for the employees at J.P.Morgan which has taught me the guru mantra for personal excellence at one's workplace. Further the interaction with the Executive director, Vice presidents and associates has taught me a great deal about corporate life. Working remotely with team member s based in London and New York, has helped me enhance my soft-skills and communication skills. Given hard deadlines for project completion, the work has been challenging and simultaneously intellectually rewarding. This internship has immensely helped me prepare for the industrial side of computer science. The exposure to solving real time problems in given deadlines has equipped me with time management skills, logical and technical reasoning and office-life ethics. Working in such a big company, even a simple job requires multiple steps of completion. This order and check system has taught me to be patient with company procedure and follow methodical protocol for executing jobs and projects assigned to me. Apart from the work culture at office, the group discussions and quizzes, time to time gave us a reflection of our progress so far. Overall, the experience has been helpful in shaping our minds for the corporate jobs ahead and preparing us mentally to handle the work pressure and stress to strike the perfect work-life balance.

Company: J.P. Morgan Chase, Mumbai

Sweety Joge (2014H149281P)

I got theproject of automation of process of making financial reports for clients doneby thefinancial reporting team. It also deals withthe Finding &Correction of errors manually so as to improve the quality of financial reports. The major time spent was on Coordination and Management of requirements with the teams for the preparation of Portfolio of Investments of financial reports of Clients. Software testing & Ms Excel are the skill sets required in implementing the project. Inthisexperience of Internship, I have learntaboutthevariousorganizational divisionsanditsfunctions. Ilearntthefinancial report makingprocedureand howitis performedat JP Morgan Chase. Ihavelearnthowtoworkeffectively alongwiththeteamtomeetthe deadlines. A lot of different work came in to our team during the deploymentprocess which helped me learn working under pressure. Process has helped me increase my knowledge infinanceby understandingthestructurein depth.

Company: JP Morgan Chase, Bangalore

Aditya chandrasekar (2012A7PS278H)

As a part of my Practice School II Program, I interned at the Risk and Technology Division of JP Morgan Chase, Bangalore, along with two of my colleagues from BITS Pilani, Rohit Kumar Sharma and Tanmay Agarwal. Coming from a Computer Science background, I was initially a bit apprehensive about the work, since I had no prior knowledge of the core finance concepts and terms. The terms such as Counterparty, Credit Risk, Value at Risk (VaR) would have freaked me out before this internship. But, we had a proper guidance from my team mates and they patiently explained us about the financial concepts that we need for the project that we were assigned. This helped a lot and prepared me for the work that I was about to do. The project that was given to us was a resource optimization project. There is an existing in-house JPMC application that calculates one of the financial metric that is needed by the traders for their day-to-day transaction. Our project focussed on the application of a Big Data tool, Apache Spark for this financial application. Our aim was to increase the resource utilization efficiency of this financial application by using Spark for handling the data. Since Spark was new to us, we had to spend about a week to get accustomed with the operations in Spark. After this, we started the Proof of Concept (POC) stage of our project. In the POC stage, we implemented all the important modules that incorporate spark into the existing financial application of JPMC. We analysed the logs of the current implementation to derive some important statistical observations and also performed analysis on the memory requirements needed, when spark is incorporated into the financial application. At the end of the POC stage, we made sure that the results of the financial metric of interest matched with the results of the current implementation. Working at JP Morgan Chase has been a rewarding experience, overall. We got to work on an exciting project involving the latest Big Data technology, Apache Spark. The project gave us a global exposure as we had to work closely with the teams in Beijing, London and New York. I would recommend this practice school station highly to my juniors and I wish them to get the same level of exposure and experience that I had during my time at JP Morgan Chase.Regarding the skillsets required for the work, I would say that good programming skills in Python and Java and an interest to learn about new technologies that are used in the industry are required for successful completion of the projects at JP Morgan. Regarding the courses that are required, compulsory courses in Computer Science are sufficient for the project work. The student

does not have to take the courses such as Machine Learning and Data Mining in order to work on Big Data projects at JP Morgan. These concepts can be learnt on-the-fly during the course of the internship. An experience has both positive and negative sides. Our experience at JP Morgan revolves more on the positive side than on the negative side. The only thing that could be considered negative is the long working hours at JP Morgan Chase. The job is not a typical 10-5 job and it would require staying for longer hours to complete the tasks. Since the work was enjoyable, we did not find this to be a big problem. I thank the Practice School Division for giving me an opportunity to work at JP Morgan Chase and I wish that this company remains as a PS II stations for years to come and provides a good learning and working experience to the students of BITS.

Tanmay Agarwal(2012A8PS500P)

My PS-2 internship with JP Morgan CIB, Bangalore began in Jan 2016. Initially just after the allotment, I was skeptical if this internship would be fruitful as this was the first time they were recruiting BITsians. But my confusions started dissolving soon after I joined the company. The transition from academic learning to industrial experience was quite smooth as we got plenty of time and resources to polish our skills and understand the project well. My project revolved around developing an application using Apache Spark which is clustering computing framework for big data computations. The aim of the project was to improve the current resource utilization of the hardware infrastructure by ensuring fair distribution of workload among the hosts in the cluster. The project was very fascinating and challenging throughout. It was one of the critical projects as it would end up saving a huge amount for the organization. The mentors and the people in the team were quite helpful as they played a major role in our transition. They were kind enough to offer us any kind of help in times of any difficulties. My experience has been amazing overall as I got the opportunity to learn a new cutting edge technology, Apache Spark in my first industrial experience. The learning curve has been more than exponential for me. This internship gave me the opportunity to work closely with the teams in Beijing, London and New York and also the golden opportunity to interact with the firm's global and India Chief Information Officers. Talking about the skills that were required for this project, core concepts learnt in Object Oriented Programming, Data Structures & Algorithms and Operating Systems helped. Apart from this, curiosity and interest to learn any new technologies was an added advantage. I would highly recommend this station to my juniors who are looking for a good learning experience especially in the field of big data."

Company: Leap Consulting, Trivandrum

Jaya Krishna Vemula (2012A1PS516G)

My PS station was Leap Consulting, Trivandrum. Even though the main office is in Trivandrum, I was sent to Kochi. Kochi branch was started just a month before we joined the PS station, and we had only one client in Kochi at that time so only one employee who was working there. In February I joined him. Our client was Beta Healthcare Products pvt ltd. basically our job was to assist them during the Implementation of ERP there. Over the time we had to collect data from each department and sort them in a format that the ERP team wanted. During that process we had to come up with a nomenclature for the materials on our own and we had given a unique code for each and every raw material, mid-products, final products, Suppliers, Vendors etc. Everything was done using the Microsoft Excel only. Technical

requirement for that job was to know advance excel. I learned advance excel from the tutorials that ware provided to us by the PSD at the beginning of the PS2. I cannot say this is a great PS station but the experience was great. The workload was not that high and we got considerable amount of free time so one can prepare for competitive examinations comfortably.

K Sai kiran (2011B1A1670G)

The experience at LEAP consulting has been fruitful and important for the career growth of the individual who wants to excel in the domain of consulting in the near future. It is the one of the best firms to understand about consulting from the ground level. Working at this firm has helped me to gain experience and skill set required to work in a corporate life. The initial phase of the project involved learning assignments. These learning assignments required the prerequisite knowledge of advanced excel functions, pivot tables, excel essential functions. These topics were learnt from taxila, which werereally helpful in completing these assignments. The next phase of the project involves teaching finance to non-finance professionals in hospitals. The topics that were covered include corporate governance, Risk management, Ethics, Segregation of duties, delegation of authority, and Frauds. These topics were really helpful in getting basic understanding of financial terms. The third phase of the project involved in preparing business models and questionnaire for different types of resorts and travel agency (Riya travels) respectively. Robust business models were prepared in relation to the hotels and resorts in the country. Recreational facilities and one day stay in resorts are the topics that were studied for the resorts project. In order to evaluate the agents at the Riya travels questionnaire for different departments in the agency has been prepared. All the employees and directors were friendly and were always there to help the interns whenever possible. The use of internet, which is a treasure of vast amount of latest and historical information, has been the basis for the primary and secondary market research which in turn forms the ground work required for the projects at the consulting firms. The experience at PS-2 helps the individual to develop his knowledge base and interaction with industry personnel. We get the opportunity to interact and learn from the top C-level managers in the firms which is the main USP of the consulting firms. The task of interacting with the clients which is the most important task of the consultant has been an eye opener for the fresher's who foresee their future in consulting. Finally, the practice school has helped me to implement the techniques as well as learning new concepts related to market research. I would like to recommend this station to all the engineering students who want hands on experience in consulting and see themselves as future consultants.

Visham Goel (2011B2A1558G)

Working in Leap Consulting has been nothing short of vast ocean of learning opportunities. Being a 3 year old start-up, it has grown at tremendous pace with wide variety of services provided to clients. For a student with engineering background who wants to experience the world of consulting and financial services, Leap Consulting provides ample opportunities. The work assigned was market research based projects and Excel based worksheets. One of the excel worksheet project was to develop an interactive task calendar which was also informs the user about the upcoming task/payment due for the day. It was a technical project and improved my excel skills a lot. Although knowledge of advance excel and VBA was welcome but many things were learned during the course of assignment. Online resources available on Taxila proved useful in completing the assignments. The next phase involved primary and secondary

researches. In addition to strong analytical and math skills, one must be an effective communicator who interacts well with groups of people. In addition to strong writing and public speaking skills, excellent quantitative skill is a must and the ability to gather and interpret statistics. Computer skills, including word processing, data entry, and Internet research skills, are essential. Several reports along with presentations were submitted over the course of PS-2. Some of the examples includes: operating model of a resort/hotel, key sources of revenue leakages in hospitals, business model for a business center in Trivandrum etc. The employees are friendly, especially the Director under whom I had to work and report every day. It's an incredibly excellent ps-2 station if a student wants to experience the world of consulting. The work experience and skills developed over the course of 5.5 months proved extremely fruitful and boastful to me as it will help one to pursue career in a consulting firm.

Company: Lexinnova, Gurgaon

Aman Singh(2011B1A8682G)

My PS-II experience at LexInnova was a satisfying and enlightening one, as I was introduced to intellectual property and patent litigation. It is a niche area and not well-understood by undergraduate engineering students. Patent consulting combines the knowledge of engineering concepts, patent law and technical consulting. Working in the industry for five and a half months, one can actually comprehend the importance of patents in the constantly evolving technological landscape. The five and a half-month experience acted as a bridge between our academic learning in the past six years and meeting the expectations and deadlines of clients, that include top Fortune 500 firms. My knowledge of electronics courses, along with my basic computer programming knowledge and analytical skills was put to the test. However, it was even more important to have an idea of existing and upcoming technologies in different fields of technology, which was something I constantly read up online on tech blogs and in magazines. The analyses also involved consulting fellow Intellectual Property team members from BITS Pilani and IIT campuses, and well-qualified technology experts from world-renowned universities who had industry knowledge. Our landscape reports and schematics, which highlight the strength and relevancy of patent portfolios of companies for divestment and review, not only drive mergers and acquisitions, but are also utilized by famous publications such as the Wall Street Journal and Forbes. Invalidity and validity analysis assignments prove to be vital for companies launching products in a country for the first time to avoid future litigation pertaining to infringement. All these analyses are therefore crucial in important business decisions. The work involves query-based searching in databases, with operators similar to SQL, along with a proficiency in some of the Excel formulae and other Microsoft Office tools. The patent portfolio analysis allotted to me was primarily related to memory, chip architecture, networking, cloud storage and radio frequency integrated circuits. My research on the applicability of the patent inventions to the latest technologies enhanced my knowledge of the modern electronics and telecommunication industry. I also learned that time management and the search and analysis methodologies were vital for meeting deadlines. One must also pay attention-to-detail and be thorough. Presentation of the reports and the marketing material also play a key role. The company features a flexible working schedule, in which employees spend 9 hours in office. If employees and interns are required to stay back in order to meet a deadline, the company's work policy allows interns and employees to come late on the next working day. Knowledge-sharing sessions are held on different computer science concepts and IP topics. Employees

from any department can join in and interact in these sessions. Workshops on topics such as time management and health are also held frequently.

Ayush Ahuja (2011B2A4584G)

The overall experience at LexInnova, Gurgaon was decent. Even being a college fresher and knowing nothing about electrical & electronics, I was exposed to the high working standards of the company, the very flexible and optimized working condition, highly qualified and experienced employees with whom I could share not just my training's issues but also my day to day happenings. The learning opportunities at LexInnova are vast and the learning curve will never go down, provided you're interested in EEE or EEI. The working hours were from 10:30 AM to 7:30 – 8:00 PM (Monday to Friday). The timings weren't that strict, provided you're not overloaded with projects. Prior knowledge of MS Office & report writing is a plus point. Even though you'll be given training on Excel, VBA. The work becomes interesting only if you're keen enough to work in a research oriented environment. You shall be working with brilliant people who will always be there to guide you whenever needed. Consultants are quite easy to approach and they help you improve every day. I majorly worked on Patent Landscape reports for marketing and client purposes. Besides the technicality involved in patent analytics, I actually gained knowledge about, how client deliverable reports are made, what kind of language is used in a client deliverable report and what all necessary elements are required in the same. I was lucky enough to work directly under consultants for multiple projects. Towards the midterm of my internship, I was also involved in an automation project for the Marketing & Sales Insights team. Since I already worked on tools like Excel and VBA, hence I was able to develop an automated tool for lead generation purpose. Employee engagement activities are also there, the Human Resource department take initiatives to maintain a healthy environment in the office and keep things transparent as much as possible. All in all, it totally depends on how you to take up the opportunity to enhance your skill set. Either you sit and crib that you're not liking the IP (Intellectually Property) field or you take initiatives to learn new things every day.

Manish Kumar Agrawal (2011B2A8629G)

I have been allotted Lexinnova, Gurgaon as my PS station. I have experienced the various aspects of corporate life through the entire 5 months duration. Overall experience was great, in sense of learning new technologies, dealing with the problems and making good communication with people. This PS-2 station gave me many opportunities to explore myself and boost up my confidence. I got familiar with working environment, required knowledge and attitude for a company. I learned the various methods and techniques of analysis for the intellectual property. Throughout the entire duration of PS-2, i have worked on various projects in the domain of intellectual property like patent invalidation, Target scouting, Portfolio analysis, and Landscape analysis. From every project, i came to know about a different analysis method for intellectual property. These projects helped me to familiar with the basic concepts of the intellectual property and the knowledge of the current market situation of the intellectual property industry. Most of my project work was based on understanding and analysis of the patent technology. I have also worked on some minor projects in which I had to search for technology expert on internet. These projects improved my searching, problem solving and analyzing skills. All employees and the mentor were very friendly and helpful. Their supportive nature and calm nature motivated me towards my project work. I really came to know about teamwork and handling the pressure of work. Apart from the work, the

company organized various fun events like birthday celebration, fun games etc. Monthly feedback session was also held to short out our problems and challenges. Overall i had great time at lexinnova. PS-II helps one to build their persona, knowledge base and interact with industry experts. The experience at PS-II, if not affect my future career prospects, has at least made me aware of the current industry standard and situation and that adds to better chances at scoring a workplace.

A.G. Nirmal (2012A8PS318P)

My PS-II at Lexinnova was a great experience. Although I was foraying into a completely new field and industry, I felt comfortable right from the beginning due to their various induction and training sessions. Lexinnova is an Intellectual Property consulting firm and we were trained and given experience on various projects including Patent Invalidation, Patent Infringement Analysis and Landscape Analysis. The peers and colleagues in the organization are brilliant and it was fun to mingle and work with them. Our work timings were 10.30 am to 7.30pm although it was flexible, except when you were overloaded with projects. After a few months, we were also given a chance to be involved in live client projects. This made me learn a lot, especially in time management. I was also given a chance to work for other departments, such as Marketing and Expert Value Maximization and it was enriching. Various useful training sessions were also there for VBA programming etc. Employee engagement activities were conducted by the HR department and they organized various activities like Fun Fridays, Yoga session etc. which brightened up the workplace. Anyone with a zeal to learn new things would like the work culture here, although the firm mainly deals with electronic patents.

Vidit Parashar(2012A8PS401H)

Overall the PS2 experience at LexInnova has been holistic and highly learning.The major skills I acquired during my 5 and a half months internship in this reputed company are patent analysis and Excel. One of the major projects that I was part of, required manual analysis of patents of a reputed firm on marketability and detectability parameters. It required technical understating of the patent and analysis it as per client requirements in the minimum time . The patents mostly dealt with electronics and networking concepts. This further helped me widening my horizons in the topics learnt during my college stay and also acquiring new and latest technologies in the field. Other major project that I worked on was landscapes. It involved studying a specific technology and analyzing the top companies, countries and jurisdictions having the highest number of patents in the given domain. It required formulating search strings specific to the technology, then working on the patent set on Excel and using different tools and functions in excel like pivot tables, lookups to make required graphs. In the entire internship experience I learned to work with people and realized the importance of colleagues and office culture. It was astonishing to see how my seniors used to meet their guidelines but still help us with every single confusion we had during our tenure. To conclude I would like to suggest this company to all the people who are interested to work in the IPR domain and work in a company that has the most friendly and helpful people around.

Shantanu Maharwal(2011B2A3700P)

The main projects which I've worked upon is Landscape analysis, prior art search, invalidity, expert search and Freedom to operate search. Almost all of them were related to the electronics domain. The main skill set required was formation of strings to search better on various databases be it google patents, innography or thomson innovation. Each of them had their own wildcards which were included in their tutorial which made them easy to understand. The major learning experience in this PS has been the adaptation to a corporate lifestyle. I have learnt how to interact and work in such environments and grow personally. Along with all this, this place also helped me in brushing up with my technical skills which were acquired during the course of my study. From projects point of view, the procedure has been almost kind of same for each one of them but the learning each time has varied. A little bit of MS excel was also used and various training conducted here helped me in understanding it better.

Mudunuri Likith Sai Varma (2012AAPS832H)

The Experience in Lexinnova has been wonderful. Exposure to Intellectual Property Industry is amazing Learning Experience. You are always learning new things and learning what is really going on in the technology sector. I got to read patents about technologies usually referred to as "Technologies of Future". With this knowledge it's always like you are a step ahead into future. I got to work on quite interesting projects like Infringement, Invalidity and Landscape Research. In each of these projects the learning curve is very steep and yone always has to stay focused to achieve and meet deadlines. Apart from work, the atmosphere inside the office is very cheerful. The office houses 70 brightest minds in the industry with 90% of them being in their 20s. The work experience is almost like any other startup with maximum work flexibility and minimum red tape. The managers and mentors that I have worked under like Mr. Aditya Bansal and Mr. Manav Garg are quite experienced and good at what they do. They have been a source of immense knowledge and support throughout the internship period. I would, without a doubt, say that my days at LexInnova have been one of the best experiences in my life. My major accomplishments include publishing my report on a renowned IP website *IPwatchdog*. I have always been one of the first choice among interns for a new project.

S.Lohit(2012AAPS176H)

My overall experience at LexInnova was decent. Even though all the interns are new to this industry, the employees at LexInnova helped us understand the processes and strategies within a short span of time. Every manager /mentor is approachable, friendly and supportive. I realized the importance of attention to detail, communication skills and innovative mindset in a corporate environment. I worked on various projects from all the departments. I majorly worked on Landscape reports which are used for marketing purposes. Apart from patent analysis, I actually gained knowledge about how client deliverables are made. I also worked in the communications department for India Patent Foundation, the CSR wing of LexInnova. I learned the process of writing mails for various purposes. I also gained knowledge about the points which are to kept in mind while pitching to a client. Prior knowledge of excel and VBA would be really helpful. Basic understanding of codes is also helpful. Training on Infringement, Invalidity, landscape and Freedom to operate would be given. The work becomes after 15 days of joining. Initial 2 weeks would mostly be trainings but after there'll be variety of projects to work on. I think PS-2 is very essential before taking up a job. One actually gets to experience the work environment, culture and research going on in the

corporate world. For a period of more than 5 months, you'll be exposed to many kinds of projects, people and activities. I feel that PS-2 made me a more disciplined and hardworking person.

Shivam Gupta(2011B5A2626P)

I have pursued my PS – II at Lex Innova, Gurgaon, which is an IP Consulting firm. It is headquartered at Houston, Texas, USA. I worked with the IP department of the firm, which is one of the 4 major departments. The firm has helped me to understand the working of an organization, and has been a tremendous help in grasping both technical and non - technical skills, like management of deadlines for client deliverables, team management, and taking calculated risks. I have played a key role in several client projects, the clients being Fortune 500 companies. The projects mainly consisted of: Infringement analysis, Invalidities, Landscape, analysis, Patentability, Portfolio analysis, Freedom to Operate. As the pre – requisite of the skill set is concerned, technical skills like Excel and the basic understanding of the working of a computer is required. And a basic engineering mindset would help to grasp the technology of the patents to be analyzed. The firm has helped me to develop skills in understanding the working and operations of the Intellectual Property Industry, and has encouraged me to pursue a career in the industry as well. We were given detailed orientations, training modules and KSS for developing technical skills, like claim charting, VBA, element mapping, LexES, Lex Score (a new proprietary algorithm for ranking and rating Intellectual Property), Landscape Analysis, and Excel. As my internship comes to an end, I am confident enough to say that I have acquired the knowledge and understanding to start working in client projects in the IP industry, and have put in all possible efforts for the projects in the firm. I am very grateful to my PS instructor, Mr. Ashish Narang, for guiding me and supporting me during the internship. He is a very approachable person, who is always willing to help his students.

J Rakesh(2012AAPS071H)

As an intern, I got to work under several departments in LexInnova. Upon getting Lexinnova as a PS station I was sort of skeptical about my role in a legal services company given my engineering background. But the work culture and the mentors around you make sure you slip right into the corporate lifestyle with ease. Over time, I've come to enjoy the work and understood why engineers like us would be needed in a legal services firm. A good chunk of my time was spent in the Intellectual Property (IP) team, where we worked on various projects to provide technical consulting for various clients to help them in litigation. As such, I spent three whole months writing reports about technology domains which was to be later used as marketing material by the company. It really does feel good to see your report get published in several reputed journals and newspapers and over the course of a report you also get to research and read a lot about the topic. We were given assignments very regularly and the induction program itself taught us how to work with various patent databases. Because IP is highly confidential, I cannot disclose the details of any of the projects that we worked on other than the methodology used. Generally, the most common projects we worked on would be *prior art search* which essentially meant finding a patent or prior published work that could be used to discredit the given patent and avoid the charges being asked of the client. After sufficient training, we also got a chance to work on a client project which involved analyzing their whole patent portfolio and classifying them based on the specified requirements. This was really interesting and a very good chance to use whatever I had learned over the past 3 years in college. Skills required for all the projects was an ability to grasp things fast and an ability to quantify obtained data

using Excel and by understanding the technical jargon in patents. Over the months, I've also spent some time working closely with the marketing and sales team to identify software that could be used for database management. In addition to this, a few of us helped the HR team get their employee performance dashboard and a few other things up and running. I'll take back a lot of things from the practice school experience, mainly a lot of feedback and the hands on experience needed to ensure we stepped out of the college attitude to be responsible employees of many a reputed organization.

Sonali Durga(2011B4A3623G)

Lexinnova is one of the sought after PS II stations amongst all. Primary reason being a magnet for intellectuals. The thought pool of the people is contagious. The main service line of the company is patent research and litigation. And most of the patents it deals with are Electronics pertaining. Hence, the firm's majority hires and interns are from electronics and related branches. I too went with the expectation of working as a Research Analyst Intern. On the contrary, I found an opportunity in the software products team. This proved to be a hugely successful opportunity for me. I have been made to work on range of languages from Java, .NET C#, PHP, JavaScript. All my work was broadly in two major projects. One of them was an ongoing project in Web Crawling. It was interesting to get a hint of web, networking, working with APIs, and Java programming in this project. Second major are of projects involved web application development in different technologies like PHP, Java, .Net MVC, JavaScript, HTML, CSS. The most interesting part of these projects were the challenging logics involved and their successful cracks implemented by me. Though they don't expect you to know any technologies mentioned above, but basic and robust programming knowledge should help one to accomplish the tasks. Being the first interface with the corporate, PS II is a great learning experience not in terms of technical knowledge, but also in terms of professional conduct, sense of responsibility, team work, etc. One thing different from academics is practical usage of your product in services line of the firm. It gives a different sense of accomplishment. Working at Lexinnova made me achieve start to end implantation of projects without minimal aide from fellow colleagues. This independence shaped my working style and creativity, as such an opportunity is rare in even startups.

Company: KPMG, Bangalore

Jayesh Saxena (2012A7PS117P)

My PS 2 experience has been nothing short of enlightening. Being from a Computer Science background with a little knowledge in Finance, I was not sure that I wanted to take up Consulting as an engineer. My internship here has really given me perspective and has helped me make a few major decisions. From the very first day onwards, I was assigned a small project, Namma Bengaluru Awards 2015 Validation. I had to work out of the client office from day 1 itself and soon I found myself in a completely alien environment inside an NGO's office. My mentor and the Namma Bengaluru Foundation People helped me settle down and understand the project. Over the course of one month, we worked together to monitor and improve the current nomination, screening and winner selection process. My second project was Project New Horizon which aimed to improve operational efficiency in one of India's leading offshore Knowledge Process Outsourcing firm for Medical Coding. Working on this project with the KPMG team has been the

most enlightening experience of my short corporate life. When one works for a huge client (10,000 employer base), it does not always agree with what we recommend due to an aversion to change. Dealing with these situations and actually seeing the benefitting results of your recommendations are learning experiences I will always cherish. The best thing about KPMG is their work ethic. From the first day onwards, I was treated as an employee and not an intern. Although this did mean a decent and sometimes overwhelming amount of work, it actually helped me learn a lot faster. Unlike other big organizations, the employees here actually devote time to the interns. Working with them in this learning environment has really boosted my skill sets and made this whole PS 2 experience a delight.

Prathamesh D Hoshing (2011B4A3686P) & Mevlon Teles (2011B2A3664G)

In brief, the team, in which we worked, is involved with consulting and reviewing in the domain of Software Auditing. We, as interns, are involved with the research of prospective clients for the advisory services that KPMG provides as well as of customers that various software publishers provide us. Further, we are assigned to projects involving improvement in the day-to-day efficiency of the resources in the team, such as product and licensing metric research, manuals and on-site reviews. Regarding the pre-requirements for the job, most of the skills needed can be learnt on the job, but good prior knowledge of Excel can make your job quicker and easier.Now for a short note on our PS-2 experience. We walked into the office of one of the Big Four with high expectations, crisp shirts and nervous faces. It was the first day of our internship. We were greeted by one of the HR members who had been our point of contact during the summer break who then introduced us to the whole team. The rest of the day involved introductions and first day procedures. We had multiple training sessions over the next few weeks with the team which gave us insight into the work that they did. We learnt how to work with Excel, how to handle huge amounts of data and analyze it, licensing metrics of various publishers, how to do research on prospective clients and publishers etc.The transition from college to work life was tough in the initial stages. There was a thorough re-vamp of our daily schedule from college. The new schedule demanded more advance planning and punctuality which was in stark contrast to our schedule in college where timetables were flexible and there was room for spontaneous planning. As we went through the rigors of day-to-day work and faced new challenges, we realized the importance of being one step ahead of the herd, which was very similar to the set-up in college, albeit in a less competitive setting.While the transition from an academic setting to a professional one can be both considered a challenge as well as a learning experience, there are a number of skills a person can gain which goes beyond his or her technical knowledge base. These are commonly called "soft skills". Soft skills are those skills which cannot be gained by merely reading a book or listening to a lecture, but continuous interaction with peers and seniors in the firm gives you a perfect platform to hone them. Example of such skills are interpersonal skills, language ability, social graces, leadership, interacting with clients and negotiating with an opposing party to reach a mutual consensus. The PS-2 experience gives a student the perfect opportunity to gain these soft skills.To summarize, interning at this company gave us a definite direction and cleared our uncertainty about our future goals and career choices. These five months gave us a peek into what our life would be after college and prepared us for the same.

Company: KPMG, Gurgaon

Akshat Kothyari (2012ABPS632P)

Learning experience has been nothing less than terrific. My work was based on software asset management which is a business practice that involves managing and optimizing the purchase, deployment, maintenance, utilization, and disposal of software applications within an organization. I was part of two different projects which focused on SAM but with different methodologies. The first was a software license investigation process where we execute the audit on behalf of a software publisher. The other one was compliance advisory where we help a firm to implement license optimization techniques by suggesting appropriate ways of purchasing and deploying software For both the project we were needed to be well aware about the license technique used by different software publishers for their software. This was done by learning their licensing metrics for different software. Apart from this advanced use of excel and its features were also needed. Features like vlookup and fuzzy lookup were used during the analysis of data acquired from audits In my time here, I learned how to work alongside other people and learned the true meaning of teamwork and how important colleagues are in an office space. From my seniors I learned the way to guide a person working under me. The way my mentor listened to my doubts and provided me with the right amount of help, not too much but just enough to set me in a path of self-discovering the solution .The work at KPMG gave me a good insight of the corporate life culture. Overall, KPMG provided me a very fruitful and satisfying learning experience. The transition from being a student in college to an intern in corporate sector, working alongside the employees was very smooth, thanks to fantastic work environment, and the friendly and helpful nature of the people working here. My major accomplishments include getting the opportunity for different on site reviews where we got to interact with client. The audits were the frontend part of the reviews. Having a part of these audits was very beneficial to me for developing soft skills and confidence.

Aditi Rastogi (2012A1PS543P)

KPMG is one of the largest professional services companies in the world and one of the Big Four auditors, along with Deloitte, Ernst & Young (EY) and PricewaterhouseCoopers (PwC). I worked under the Risk Consulting division with Forensics. Under Forensics I was a part of the Contract and Compliance Services (CCS) team. CCS helps clients identify financial misreporting and reset the compliance baseline underpinning contractual relationships with business partners. CCS can help increase the communication and understanding of contractual terms and obligations between the client and its business partner, leading to improved reporting processes and partner relationships. My prime responsibility in the CnC Program was Data Management and Analysis. I helped in maintaining the call tracker and the MIS for my team. I learnt how to approach and analyze a problem. In the process I learned several tools of data analysis and made my observations and conclusions regarding the same. During my internship at KPMG, I also got an opportunity to organize a CCS meet for the North region. I also hosted the event. It provided me a platform to interact with different people and overcome my own inhibitions. The whole experience was quite amazing as I got to test my own abilities and skills. Apart from learning various tools of data analysis, I have gained a valuable experience in terms of the working of the corporate world. While in KPMG, I observed how people survive and excel in the corporate world. I learnt the intricacies of the written communication and its importance in the professional life. It provided me an opportunity to observe, study and grip the effective way of interacting with the clients, colleagues and the customers. I

am very grateful to have worked with a wonderful team, who made it very easy for me to adjust to the corporate lifestyle. In a nutshell, it was a great experience filled with lots of learning.

Company: KPMG, Mumbai

Devprakash Satpathy (2012A8PS286G)

It is a well-known fact that some organizations lose revenue, license fees, royalties, or pay higher amount to partners than they should to third parties with which they have contractual arrangements. Contract Compliance Services (CCS) can help them recover those funds and improve internal processes to help ward off further losses and over-payments. In addition, other non-financial benefits can be achieved, such as process enhancement and improved relationships between business partners, among others. CCS helps clients identify financial misreporting and reset the compliance baseline underpinning contractual relationships with business partners, which can result in potential collections or savings with significant return on investment (ROI). CCS can help increase the communication and understanding of contractual terms and obligations between the client and its business partner, leading to improved reporting processes and partner relationships The work involves working with major software vendors and ensuring that their customers are license compliant. This work includes on-site reviews of the client and looking for aberrations in the licenses purchased and machines deployed. CCS provides license review and advisory services Through the course of the internship, I have been introduced to the niche of software compliance. The licensing policies followed by the major software vendors of the world was also introduced. Moreover, I developed an understanding about the intellectual property business. The major responsibility being centered on data management and analytics, I learnt many techniques of data analysis and got a practical experience of how these tools are used to take decisions at managerial level. This internship helped me in honing presentation skills and also client interactions which is a very rare opportunity to get so soon into ones career and that too being an intern by going on a number of client meetings and carrying out a number of reviews myself on small clients obviously but still the learning curve is pretty steep in KPMG and the confidence and support that one gets from the team in KPMG helps in preparing one for a professional career up ahead.

Akshay Sethi (2011B1A3665G)

As a dual degree student, I got the opportunity to work at KPMG Mumbai for an entire year. Being with the strategy and operations team, I got to work on real time client engagements and live projects. In the course of 11 months as an intern, I have been a part of two full time engagements, and one part time project. The engagements range from consulting on manufacturing strategy to implementing manufacturing excellence techniques across operations. The Partner I worked with was responsible for the manufacturing and pharmaceutical industry, hence the projects I was involved in were related to this sector. The project I am currently working on is in the domain of operations consulting – to implement manufacturing excellence across the production plants of a 2000cr Indian pharmaceutical company. The project involves studying the existing processes to manufacture various dosage forms, identify gaps and bottlenecks and thereby implement systems to efficiently manage processes to increase the overall

productivity. The engagement timeline has been divided into three phases – the as-is phase which involves the diagnostics and baseline formulation to arrive at the present state of the KPIs to be tracked. The next phase is the program design phase, which involves charting out focused improvement projects based on the root cause analysis of the pain points identified during the as-is phase. The third part is the implementation and control phase wherein we facilitate implementation of the action plans and troubleshoot any deviations. My work requires me to be full time at the client site, along with a team of consultants and ensure smooth execution of the project across the three phases. The work involves carrying out intensive data analysis using MS Excel and identifying gaps, carrying out cost benefit calculations to arrive at the best possible solution, imparting trainings on various statistical and management tools to create value and ultimately enhancing the business performance.

Company: Lama Capital Management, Gurgaon

D Satya Sai Harsha (2011B3A3430H)

Lama Capital Management was founded in 2013 by former Wall Street investment professionals from Deutsche Bank and BNP Paribas. They have leveraged their experience, quantitative skills, and execution knowledge of scalable strategies to build an extremely strong investment platform. At Lama, we employ highly quantitative and sophisticated derivatives trading strategies, that take advantage of short term arbitrage opportunities in asset valuations that the market presents. There is a strong focus on true alpha generation with positions neutral to equity markets and currency exposures. I interned at Lama Capital Management as a Junior Option Trader. My role primarily involves helping the Senior Trader with trade execution, risk management and market research. Having done a course on Derivatives and Risk Management has helped me immensely to get started right away. This internship was a true transition from theory to practice. I had an opportunity to witness option trading on a live real-time environment. Having worked closely with my senior-trader helped me learn essentials of trade execution and portfolio risk management. It also helped me understand and visualize Macro and Micro management of a client's portfolio. The trading techniques involved using heavy quantitative concepts, which I could relate and grasp easily, thanks to the well-planned curriculum of BITS. Apart from options trading, I was introduced to the world of algorithmic trading. I have been given a primer on the life-cycle of trading strategy development, right from preliminary research to back testing to live implementation of the strategy. Working in a start-up took me on a steep learning curve with an enriching experience. The station has all the pros and cons of a start-up, but hard-word and dedication are rewarded with great experiences. I feel lucky to be allotted this station. I have now learnt an invaluable skill of option-trading which will stay with me throughout my life. The nine months spent at this station resulted in my well-rounded and holistic development, not just as a trader but also as a person.

Company: Mordor Intelligence, Hyderabad

Saketh Rao K (2011B2A4548G)

As part of PS2, sem2 15-16, I have worked with Mordor Intelligence in 2 domains – business development and client acquisition. I was involved in the launch of a new division of the company called Mordor Patents. This process involved learning how to prepare patent analysis reports, understanding of patents and

related litigations. This was followed by website development and launch of the website. The challenging part was client acquisition. Having no prior database a lot of contacts were sourced through Linkedin. This was followed by drafting out email campaigns, as well as cold calling. The marketing side of the project involved Linkedin campaigns, mainly poster campaigns. This was initially done to understand market capability and later for brand building and client acquisition. Depending on the keywords most searched for, website was optimized for search engine – SEO activities were performed. Key learnings: Email campaigns, Patent analysis, Patent Litigation, Patent Landscape reports Patent overview reports, LinkedIn marketing, SEO .

Abhishek Deshpande (2012A1PS482H)

I have worked here in the Chemicals & Materials division. During the term, I had the opportunity to get a hands-on experience on the workings of a detailed market report, analysis the scope of growth for a particular market, its current global scenario, factors driving the market, factors that may act as the roadblocks for the growth of the market, growth opportunities in the future, information regarding the producers, vendors, suppliers, consumers of the particular product, variations in the demand of the product specific to the regions/countries as required, and every other detail regarding the product which was demanded by the client. I have acquired the knowledge of writing a report on any topic related to the chemicals and materials, which according to me, is going to serve me a great deal of advantage in the future. This has also helped in improving my MS excel skills. The working of the company was the part that I enjoyed the most. Being a startup, the work culture at the firm is very comfortable in the sense that there is no compulsory dress code. In case of any problem, you can directly contact the co-founders (one of them is a BITS alumnus) and this eradicates all sorts of problems that might arise due to sticking to the hierarchical system of working. The work load was never too high, thanks to the team lead. Almost all of the team members were of the same age group, and this helped in developing a bond rather quickly, and in the end, made the experience enjoyable. To conclude, I would recommend this PS stations to those students who want to try something apart from core engineering jobs.

Kolli Deepika (2011B2A1684H)

The past 5 and half months at Mordor Intelligence, Hyderabad has been a very good learning experience. Working at Mordor was the best experience as it has allowed me to work in different teams and this in turn made me understand the role of each and every team in detail. Also, working in this fast paced environment, I have ended up learning many things in a shorter period of time. During my PS at Mordor Intelligence, I have worked with two different teams. Initial three months I have worked with Chemicals and Materials team where the work involved in writing the samples, market reports which involves market dynamics, market segmentation, competitive landscape, company profiles, SWOT analysis, Market estimation sheet, etc and in the later half of the PS, I have worked for the SEO team where the work was online marketing which helps Mordor website in acquiring top positions in the search engine pages and optimizing the usage of key words in the content to increase visibility and get more traffic towards the site.Understanding the specific market and having good writing skills is all that is required to work in any domain at Mordor but to work in SEO team prior knowledge about Google Adwords was required which is an online advertising service. Though I had no complete knowledge about AdWords, my mentor has

guided me and made me understand every aspect of it in detail. During my PS, I have not only gained technical skills but also have understood other things like working alongside different mindset people and the power of teamwork. The most important thing that I have realized after working in this startup environment at Mordor is that hard work and creative thinking are worth a whole lot. To conclude, I would like to recommend this place as an option for the students who are really interested in market research field and want to experience the startup environment.

SHYAM RATAN ANAPARTHY (2011B1A1739H)

I have been a part of the PS II program for two consecutive semesters in Mordor Intelligence. Mordor is a market research firm and as such prepares market research reports based on the client requirements. The firm operates in a wide range of segments including: Agriculture, Food and Beverage, Chemical and Materials, Healthcare, Energy and Power, Patents, Investment opportunities, Aerospace and Defense, ITC (information, technology and communications), automation, packaging and semiconductors. Through this internship I have gained an insight into the field of market research and the various subtleties associated with it. The work involved gaining an understanding of the market in question through exhaustive secondary research, understanding the important trends and patterns through interviews and expert consultations, and consequently helping in writing certain aspects of the research report. Apart from working on the reports, the internship also involved domain building, wherein the Table of contents and Report Description for a particular topic were developed. As part of the Agriculture, Food and Beverage domain I worked on reports belonging to various sub-categories such as that of animal feeds, pet foods, functional beverages, emerging 'healthy' foods, etc. This process has shown me the importance of viable market data in the industry, and also the difficulty associated with acquiring such data. This difficulty is further amplified in the case of uncharted and rapidly emerging markets, such as that of India. The large scale data aggregation and, the primary and secondary research associated with this process are crucial in helping corporations understand the various nuances associated with the respective market. The internship also taught the way the market research field operates, in terms of conducting secondary research, primary research and also qualitative market estimations. These aspects are sure to provide a long lasting knowledge base and help in analyzing any related situations thoroughly.

Vaishnavi Guptha(2011B4A1653H)

I have been a part of Mordor Intelligence for a year now as a part of PS-II program. The company is a market research firm and prepares market research reports based on the client requirements. The firm operates in a wide range of segments including: Agriculture, Food and Beverage, Chemical and Materials, Healthcare, Energy and Power, Patents, Investment opportunities, Aerospace and Defense, ITC (information, technology and communications), automation, packaging and semiconductors. Through this internship, which was almost a year, I have gained an insight into the field of market research and the various subtleties associated with it. The work involved gaining an understanding of the market in question through exhaustive secondary research, understanding the important trends and patterns through interviews and expert consultations, and consequently helping in writing certain aspects of the research report. Apart from working on the reports, the internship also involved domain building, wherein the Table of contents and Report Description for a particular topic were developed. As part of the Agriculture, Food and Beverage domain I worked on reports belonging to various sub-categories such as

that of animal feeds, pet foods, functional beverages, emerging 'healthy' foods, etc. This process has shown me the importance of viable market data in the industry, and also the difficulty associated with acquiring such data. This difficulty is further amplified in the case of uncharted and rapidly emerging markets and GCC markets. The large scale data aggregation and, the primary and secondary research associated with this process are crucial in helping corporations understand the various nuances associated with the respective market. The internship also taught the way the market research field operates, in terms of conducting secondary research, primary research and also qualitative market estimations. These aspects are sure to provide a long lasting knowledge base and help in analyzing any related situations thoroughly.

Company: NextGen PMS Pvt. Ltd, Bangalore

Abdeali Adenwala(2011A5C6886P)

Nextgen was a very good experience for me. I have learned a lot of new things here. I have worked on Web based solution that was given by Nextgen as well as meetings with the Clients directly to understand the requirements. Major clients that I handled were HDFC, Abbott, JKH and Godrej which was responsible for 70% of the business that company does. I was a central part of this company and I learned a lot of things working here.

Company: Morningstar, Mumbai

Piyush Kontu (2012A2PS391H)

I came to Morningstar as a part of PS II, to learn and gain knowledge in the field of finance. But as fate would have it, I was a part of the Indexes-Technology team. So it was overall a new area to explore for me and I had a good PS II experience. In terms of learning, the experience has been nothing short of terrific. The time spent at PS-2 has been a great teacher in various spheres, including but not limited to understanding corporate life, expert guidance, apprehending new technologies and their developments and building a great character. Having no former coding knowledge or background, I got to learn everything from scratch. My major working areas were ASP.NET,C# for the major part of the internship. I also got to work on XSLT, XSLFO languages for a second project. My first project was to develop a Dashboard for the operations team to monitor daily Incoming/Outgoing Files. The dashboard would also display some daily report which would further help in managing index Launches. The Dashboard contained detail information for each file like File type, Size Variance, Vendor/Client and Index Dependency status etc. The Dashboard was developed using ASP.NET Framework, C# and some jQuery. The second project was to develop software which would publish factsheets for each Index as PDF's, taking XML Files and XSLT Files as inputs. The XSLT code also needed to be developed to style the XML file for factsheet publications. I got to explore new areas during my PS II and also learn the manners and etiquettes of the corporate world. In all PS II help me to develop my Personality and increase my teamwork skills. Finally, a human touch to all of it is necessary. Helpful mentors make the cut here, and almost all the seemingly unresolved questions find answers with these people. Etiquettes and professional personalities are rarely taught by books and internet. PS-2 helps one to build their persona, knowledge base and interact with industry experts. The experience at PS-2 - if not affect my future career prospects - has at least made me aware of the current industry standard and situation and that adds to better chances at scoring a workplace. My major accomplishments include not any medal or certificate but the trust and confidence

that my mentor showed in me while doing the work load. My ability to solve the problems in the way advised and also in the time allotted is definitely an accomplishment for me.

Yash Agarwal (2012A2PS950H)

The time spent at PS-2 has been a great teacher in various spheres, including but not limited to understanding corporate life, expert guidance, apprehending new technologies and their developments and building a professional character. It nourishes you in every possible way and also helps you in choosing your career. It broadens your perspective and makes you mature. I have been working here with the credit ratings team. Past five months have tuned out to be an amazing learning experience for me. I was introduced to various structured finance concepts and was provided with a platform to implement those concepts. Also I was introduced to monthly performance summary for Single family Transactions. We used to get the data from the issuers, which we used to process. Reports were published in every third week of the month. Other than this, I worked on the data visualization tool- Tableau. This software was so interesting that I used to watch its videos online. In Morningstar, Re-remic charts were initially prepared on a web charting tool, I shifted the entire process on tableau. The process became so easy and user compatible. Data visualization was so easy. Towards the end of the internship like one month prior, I was introduced to a challenging project-SFR Surveillance. For the implementation of the project, I had to learn various concepts like DSCR, capex, bullet ratios etc. On the whole, PS2 was an amazing experience. I am taking a lot with me from this well planned curriculum. I got to learn so much. Every day unveils something new. Also, it enhances your overall personality.

Company: National Entrepreneurship Network, Bangalore

Abhishek Chaturvedi (2011B4PS601G)

National Entrepreneurship Network (NEN) is one of the leading Non-profit institutes not just in india but even in the world which has the sole aim of skilling youths and providing them value added jobs. I am fortunate enough that I could be a part of this organization during my internship. I was in the Impact Measurement team in this organization and was responsible for measuring the extent to which NEN is creating impact in terms of providing jobs to people. The project involved extensive use of Ms Excel for data analysis. I was working directly under my manager who is the Executive Vice president of the impact department in NEN. The employees of the organization are all motivated, enthusiastic and so are the EVP's of various department. My manager in particular was very humble and easy to approach. He made me understand my tasks with patience and calmness. The overall work environment is great and plenty of things to learn as far as entrepreneurship is concerned. Data Validation is the first part of the project before you began your analysis. This usually involves reaching out to beneficiaries and asking them about the number of employers they are hiring and average salary of employers in their organization. Following this process is the data analysis part which involves rigorous analysis of companies based on the salaries they provide and number of employers they have hired, their revenue and growth. My second part of the project was OND data validation. Basically NEN partners with many NGOs like NIITF, APD, IAB which train disabled candidates and place them in companies like Accenture and TCS. Every time a candidate from these NGOs gets placed in a company, some amount is payed to the NGO. Based on the documents

provided, I helped in identifying the candidates that are eligible for payment and thus helped in clearing payments worth thousands of dollars PS-2 at NEN gave me a much needed exposure of how things work in corporates. Team work, coordination and meeting deadlines are some of the most important things that I learned to value during my internship. The organization is creating huge impact on lives of many individuals by skilling them and providing them jobs and in the field of social sector it is one of the major players, not just in India but in many countries including Indonesia, Pakistan and Malaysia and I was fortunate enough to be its part for good 5 months.

Company: Price waterhouse Coopers (PWC), Bangalore

Devendra Mittal (2012A2PS592P)

The 5 month of experience in PwC has been remarkable. I personally had a lot of exposure and takeaways from the work, in simply few months. I was part of Capital Project and Infrastructure vertical which is a part of a larger practice namely Government Reforms and Infrastructure Development (GRID). Comprising finance professionals, architects, engineers, real estate consultants, PwC's Capital Projects and Infrastructure Practice delivers a fully integrated service offering covering the full project life cycle of an infrastructure asset across all functions, sectors and territories. During my stay I had been part of many projects. One of them was Invest Karnataka 2016, where I got a unique opportunity to help the team conduct the 3 day mega event. Took the responsibility to conduct and coordinate meeting between MD, KPCL and top business houses in Mumbai. Moreover got the opportunity to prepare and to take care of all the logistics for Karnataka's CM and Agriculture Minister's meetings during the event. Got a wonderful chance to meet Ministers, Embassies and delegates of other countries, CEO and CFO of top business houses in India during the event. Apart from the event, I had been complementing my team in many proposals ranging from Data analysis of different countries to identifying gaps in Karnataka Tourism. By working in so many wide variety of proposals, it had given me a wider view to approach a complex problem in real terms (more practical in Indian context). One of my main project was to find the urban challenges for Indian cities and do benchmarking for various parameters. By doing Regression on 15parameters on 41 cities across the globe I identified the gaps and shortcomings in our Indian cities and found out the optimum/ ideal benchmark for all the parameters taken. This was all possible because of the priceless guidance of my manger Mr. Ashish Chandra who directed me in every step and improvised my approach each and every time during all our discussions. The other part which enhanced my learning were from my experienced colleagues which helped me giving valuable counsel in every aspect of work and life. Moreover Internal PwC trainings of Excel and PowerPoint has helped a lot to increase my productivity and presentation skills. Nevertheless the transition from academics to corporate culture is at times difficult but PS division has helped me to overcome that and has built huge confidence by giving me this unique opportunity for which I will always be indebted.

Company: Price waterhouse Coopers (PWC), Chennai

Chinta Patanjali (2012A4PS242P)

My 5 month internship experience at PwC has been simply amazing and I would like to thank PS Division for providing me with this wonderful opportunity. I worked in the Infrastructure Practice within the Government Reforms and Infrastructure Development (GRID) team in Advisory Line of Service. With deep expertise in infrastructure planning and development, the practice offers integrated solutions covering the entire life cycle of an infrastructure project right from economic planning, project feasibility, financing and optimizing use of services and delivery costs, to developing an integrated approach to pricing, and capacity building for developers and executing agencies. During my stay here at PwC, I mainly worked on the project: "Integrated Infrastructure and Economic Development of Tamil Nadu Coastline." The objective of this project was to arrive at a list of priority projects that can be funded right away (as a part of a proposed industrial corridor) which have a significant impact on the manufacturing activity in the region. Initially, secondary research was done to collate a list of all theinfra projects that have been proposed/under progress in the region. Then, extensive stakeholder consultations were performed to analyze issues regarding costs, time and service levels of the current infrastructure facilities. The demands and issues put forth by them were used to shortlist projects which are in the advanced stages of execution that help in easing the identified bottlenecks. The internship was a fruitful experience for me in the sense that I was able to meet and interact with industry leaders, senior level officials across various government organizations such as NHAI, Southern Railways, Tuticorin Port Trust, Tamil Nadu Water supply and Drainage (TWAD) Board, SIPCOT Industrial Parks etc. The soft skills such as relationship building, time management and team work that I developed through this project are priceless, not to mention the domain knowledge on logistics industry, railway and port operations. The immense support and guidance that I received from my manager and colleagues at PwC helped me ease into the corporate culture from an academic setting. To conclude, I believe that the experience at PwC has helped me grow into a better person, ready to take on new challenges in future.

Company: Price waterhouse Coopers (PWC), Delhi

Sanchit Aggarwal (2012A4PS260G)

I would like to thank our PS Division for providing me this wonderful opportunity to intern at one of the 'BIG 4' companies. I worked in the Capital projects and Infrastructure department of the Government reforms and Infrastructure Development team, in the Advisory department. I want to get into consulting later on in my life and this internship allowed me to get an experience of what it's like to work in one of the top drawer consulting firms. I worked on various projects, some involving client interaction which added to the experience. Working on and solving real life problems regarding Infrastructure developments in India gave me a lot of motivation. I worked on a variety of projects, ranging from Commercial due diligence of a Business conglomerate in Middle east to developing marketing & commercial strategies for Freight corridors being developed in India. Each and every project helped me improve my skill set and soft skills. I worked on excel during most of the time, I had a basic know how of the same, but the work required a higher level of proficiency. The videos provided by the PSD and other

online resources helped me learn on the go. Apart from that I took part in various trainings offered by Pwc, the most influential was presentation making and writing skills which was a great experience. My project helped me understand the Indian logistics Industry and how freight movement of commodities takes place in the country. One key learning takeaway was understanding how different Industrial clusters are located in India in different states. Benchmarking railways operation against global operations is a key takeaway. The entire experience was really good and the work culture at Pwc impressed me a lot. I made a lot of friends there and learnt a lot from them. This internship has brought about a number of good changes in me, the most important one is Confidence to work in big multinationals.

Company: Price waterhouse Coopers (PWC), Hyderabad

Prateek Kichlu (2012A4PS202H)

Never did I imagine that I would get to work for a "Big 4" at such an early stage in life. The learnings from PS-2 internship have been immense and helped inmy overall development and acted as a launch pad into the professional world, all thanks to the PS Division. I worked in the Infrastructure Practice in Government Reforms and Infrastructure Development (GRID)team in the Advisory Line of Service. The GRID team has a large number of experts in different sectors like, Social Infrastructure, Transport, Housing, Water and Sewerage, environmental, ports, financial experts. I worked on different projects and assisted on many fronts during my internship. My manager insisted on learning as much as I can instead of confining myself by working on a single project. I started by working on Hyderabad-Nagpur Industrial Corridor and made a note which gave the overview of the corridor. I also learned about the Inland Waterways of India, Development of Amaravati city and investment opportunities for it, different financing strategies used in a project, Public-Private Partnership structure, smart city proposal and industrial development in different cities. Along with working on these fields, I also assisted my team in preparing proposals to bid for different projects. This gave me insights of the work proposed in these projects, the background for same and how an applicant for that project is supposed to go about meeting the deadlines and providing deliverables. The work pressure experienced when the deadlines were squeezed helped me prepare for what will come in life ahead. This was all possible because of the consistent guidance of my manger and my buddy who directed me at each step. My colleagues helped me at all points and were the main source of my learning here, be it in work or life. Moreover Internal PwC trainings has helped me increase my productivity and presentation skills. The dedication that people have for their work here has inspired me a lot and I feel that all the responsibilities entrusted on me in the last 5 months helped me grow as a person and groomed me for all the challenges awaiting me in the corporate world in near future.

Company: Price waterhouse Coopers (PWC) , Mumbai

KunalBiyani (2012A2PS506P)

My PS 2 station is PricewaterhouseCoopers (PwC) Mumbai. I have been working here since the last 5 months as a trainee in the Infrastructure Advisory Vertical of the company. The past 5 months of my experience here at PwC has been a tremendous learning experience. I was new to the world of consulting but the kind of exposure I received at PwC help me adapt to the work a lot faster. Major part of my project

was a study to be completed on behalf of PwC but I also had the opportunity to work on various live projects as well. There were various learning opportunities here. Once my role demanded me to learn financial modeling. But the kind of support and help I got from the seniors here made my work a lot easier. Apart from this I also gained proficiency in excel and making corporate presentations. The Infrastructure advisory team at Mumbai office deals with a wide array of business sectors such as ports, Airports, e-commerce logistics, Roadways etc. I had the opportunity to work in the ports sector. The team here advises various investors looking to invest in ports after carrying out the feasibility study for the revenues to be generated from the port in the future. In order to do that, we need to look in to various sectors which promote traffic at these ports. Coal being one of these commodities which is imported on a large scale currently. Hence in order to assess the coal import demands, we need to look into the power sector, Steel sector and the Cement sector which are the major end use sectors of coal. Further it carries out the assessment of requirements of imported coal from these plants and comes up with the revenue figures for the investors. My project was mainly to assess the imported coal requirement of the country arising from the power plants that would be helpful for the company's future projects and identifying new business opportunities. This required assessment of the imported coal based coastal power plants and the current production levels of coal in our country. It was overall a great learning experience. This PS 2 experience was a great learning curve for me as I was new to the world of consulting. I also realized how different the industry is from the academic projects that we carry out in our college and he kind of knowledge and insights needed to carry out the same. Overall it was a great learning experience and I would recommend PwC as a PS Station to the fellow juniors who are looking to work in the consulting sector as it will be a great learning experience for them as well.

Company: Probe Equity Research, Bangalore

Karthik Ramakrishnan (2012A3PS120G)

The Practice school 2 program at Probe Information Services (formerly Probe Equity Research) has been an immense learning experience about the workings of businesses and the industry. We could get an insight into a technology product based company. I was working in the data analytics division of the company and the project that I was working on was titled "Probe MIS Report generation and automation". The aim of the project was to create a MIS (Management Information System) report which would track the usage patterns of the users of the product of the company which is called Probe42. The report analysed and identified trends in the usage pattern of the various users both at an aggregate portfolio level and at an individual company wise level. This enabled the management to identify and devise strategies to increase usage on their platform so that the revenues could be increased. The report was also used by the Sales and Customer Success teams so that they could track the usage of the product for each and every customer. The project involved a thorough knowledge of MySQL, an understanding of R programming and common statistical parameters. The generation and automation of the report creation were done by writing code on R studio. We learnt the programming languages during the internship duration through online courses and the guidance of our mentor who helped us during the course of the project-from conceptualizing and designing the project report to automating the MIS report generation

process. The internship was a great learning experience overall. The work culture is also top notch and all the employees are expected to learn on the go and are encouraged to contribute as much as possible to the company. This internship has given me a keen insight into the workings of a technology driven Product Company which is at a high growth stage. Idea generation, conceptualisation and working to build value has been the highlight of the company and I hope to use my valuable experience further ahead in life.

Company: Zinnov Management Consulting Pvt. Ltd., Bangalore

Nikitha Anne (2014H149283P)

There are many significant things that I have learnt from my 5-month Internship with Zinnov Management Consulting. My exposure and experience helped me improve my Analytical and questioning skills. I understood how exactly a consulting project is implemented. My Project for this 5 months was to formulate a Market Expansion strategy for our Client i.e., Defining a comprehensive & executable strategy plan to help Our Client achieve exponential growth over the next 3 years. This 5-month period has definitely helped me become a good management consultant in terms of Work culture, interpersonal skills, and attitude to possess. And for this I would like to thanks my mentors Vishnu BG and Nikhil Bagde for their constant support and guidance. They have patiently clarified my doubts all through the project, making my internship a sheer Learning experience. They have supported me with few career advices when I was in a dilemma how to start off my career. Being a fresher, this is the first time I am exposed to a corporate culture to a work with teams, where I learned how to work along with other people and learned the true meaning of teamwork and how important colleagues are in an office space. I should mention about the work culture of our company, being a company with less number of employees. I got to interact to each and every person in my office and listen to their experiences with Zinnov. And all my teammates have supported and cleared m silly and simple doubts throughout the project. Finally, to sum up – Zinnov has made me stronger in terms of knowledge, exposure and gave me immense confidence that I can be successful as a Management consultant and made me understand that I have enough skills to be an ideal consultant. This has been an experience of a life time and has definitely made a better Professional and a better person. My major accomplishment would be the Pre-placement offer that I was given by the company within first 3 months of my internship. And also my mentor praised me for my ability to understand and solve the problems quickly and also for my grasping skills.

Ishita Kararia (2012A1PS404P)

For those of you who are having difficulty understanding what Zinnov does, it is a mix of Gartner and McKinsey. It does a lot of in house research in the engineering and digital practices domain, as well as consulting for clients in the same domain. The word Zinnov is actually an amalgamation of 'zeal' & 'innovation'. I as an intern, worked with 'Zinnov Knowledge Centre' (think on lines of BCC for Bain). ZKC consists of a set of dedicated analysts that provide round the clock market research support to the consulting and sales teams at Zinnov. I got to work on a lot of short assignments here. The first one was with the consulting team for a French MNC that wanted to acquire a captive in India. I worked on a database of around 929 companies, and captured a vast no. of data points about these companies- their location in India, Head count, the financials of the company, information about the concerned leadership,

et. al. These parameters were to be then analyzed further by the consulting team, to short list around 5 companies, on which more in – depth research was to be done to make a recommendation to the client. The resources used were annual reports and LinkedIn. Basic excel skills were adequate to capture the data; advanced functions were not needed. The second major assignment I worked on with the GAP (Growth Advisory & Performance) team- The landscape of FinTech Startups in India. I did a landscape study of all startups in the FinTech domain that were based out of India. I created a database of all the startups, which included the location, founding year, information about founders and funding details of the startup. The resources used were websites such as mattermark and tracxn, and basic excel skills were used. This database was then used by the GAP team to make a report on the startup landscape, which was to be pitched to customers. At my 5 moths with Zinnov, I had the opportunity to work and network with some really well qualified people, and got to learn a lot of them. I do wish I had gotten to work as a part of the consulting team though, as opposed to doing data collection work; as I had the capability and skills for the same. It would have been a much better learning experience. It was actually an Internship with 'Zinnov Knowledge Centre' & not with 'Zinnov Management Consulting'. It was however, a good learning experience none the less. The Practice School experience helped me become familiar with the required attitude and the working environment of companies. I'm confident the social skills I picked up here will help me a long way in my career.

Domain- Electrical & Electronics Engineering

Company: Intel India Technology Pvt Ltd, Bangalore

A Yogya Sree (2012A8PS355H)

I worked in Standard Cell team of Intel Mobile Communications. The past five and half months were great with respect to learning aspects as well as adapting to the corporate culture. The help we got from our mentor and the entire team was remarkable. The work environment is amazing here and the mentors are always ready to lend a helping hand. My project consisted of Perl scripting and HSpice coding. The main aim of the project is to automate few steps in Rv flow and reduce the number of HSpice templates to be used for further steps in Rv flow by considering only the highest power consumed combination of input sequence for each cell. The project during PS-II helps an individual to get an exposure to current industry. As everyone knows, the practical exposure we get in industry is ahead of the microcontrollers or processors we study in theory. The PS-II provides a great opportunity to work for top most organizations. Overall the experience is good.

Akash Gautam (2014H140125P)

First of all, I would sincerely thank my institute to give me this opportunity to work with a recognized company like Intel Corporation. PS-2 experience in Intel was a great learning experience. It was a substantial change from the normal academic studies to working at an organization which is usually called as Semiconductor giant. Throughout my internship, employees and managers were equally supportive to

all interns. Mentors made sure that they gave me the adequate amount of support at times. The amount of facilities which were provided by Intel to employees and interns were same which was an eye catching fact during my stay. I got into Bangalore Design Labs (BDL) team which mostly works on design and verification. I was fortunate enough to get the work of my interest. I was allotted a project named Reconfigurable Hardware Accelerator in which my work was to do RTL coding of algorithms which are widely used in the market. I was able to understand a lot about the industrially used tools particularly Synopsys VCS and techniques for design purpose especially RTL coding. This internship has helped me to improve a lot in Verilog and it taught me how to make synthesizable codes. I have also learnt how to rectify timing errors that usually occurs in design. I have learnt the techniques which are used for the parameterization of codes which is very helpful in saving hardware. My stay at Intel has completely transformed my theory backed mind into a more practical one. This internship really helped me in looking beyond the academics, made me more result oriented and taught me how to get things done in a short period of time. Now since I know the skill set required by companies so it will definitely boost my future prospects of career and will also help me in developing them further.

Akshay Mote (2014H123160P)

I've been working here as a part of the New Technology Group. The last five and half months have been one of the best opportunities that a person can get in terms of exposure to the Verification domain. Given that a large number of concepts can be only learned practically, my manager and mentor here were very considerate to allot enough time for me to learn and get familiar with the usage of Verification Methodology like UVM. They also ensured that I have sufficient resources, including the training manual and lab exercises that my mentor provided me to match up to their required level of understanding/expertise. The initial days involved getting a hang of UVM. But once that was done, I could go through application of UVM for writing targeted sequences and tests for I/O peripherals being used for integration with a SoC. The experience involved understanding the use of third party IP and VIP for the Project. A sound understanding of how the components are connected, how the Verification Environment is arranged was achieved. The things are done in a very structured way and not haphazardly and gave a taste of professionalism. Having achieved an overall understanding of the project, there was another task assigned to me. I was asked to explore Easier UVM. The Easier UVM is a code generator that works to make life simple for a Verification Engineer. I was asked to do a detailed study and understand how to use it. Later, many different cases where it could be applied to the existing projects were also discussed. The Easier UVM is a good tool to make new entrants in Verification Industry productive quite early. Working at Intel gives a sense of how working for industrial projects is different from working for Academic Projects. A lot of emphasis was laid on getting the things right but only after enough caution and thorough study of all the possible influence that a particular change/step will do. This helped develop the thought process required by a Verification Engineer and as a professional in general. Even basic things like the way the code is written accounts for a lot, because that shows the kind of professionalism and dedication you have towards your work. Being an important and my first opportunity outside academics, it really helped in getting the required attitude towards work and getting familiar with the work environment. Practice School provided a really good opportunity to interact with a range of people from the industry, whether experts, novice or enthusiasts. It was a nice opportunity to improve and learn what is needed to make

oneself suitable for the industry. This professional experience really adds on positively to the transition from Academics to Industry. This opportunity is really worth the time one has to invest in it. Working with a tech giant like Intel was really enjoyable due to the kind of work done here and also because of the awesome set of people that this company has.

Akshay Sandipan Shelke (2014H123172P)

Being an electronics graduate with major in Microelectronics, getting an opportunity to work at Intel is sort of dream come true. I was the member of Display team in the Mixed Signal IP Solutions group. My team was involved in the Pre Silicon validation of the display IP. Validation Involves checking whether an IP designed to meet some specification conforms to them or not. In the beginning, I was given ramp up time to understand the environment and methodology being followed to design reusable verification components. Also I learnt about writing test cases and use for validation. I was assigned time to brush up System Verilog and for reading literature regarding Open Verification Methodology which was being used by my team. Done with the ramp up, I was assigned the project to set up reusable environment to be used for verification of a display IP. I was guided by my fellow team members at every step. The project gave me tremendous exposure to current methodologies being adopted by semiconductor companies for verification. The internship also helped to learn interpersonal skills and in coping with working in a team. The team members were helpful and the work environment was very good. Last five and half months at Intel have been an amazing learning experience not only from technical viewpoint but also in regard to adapting to the corporate world. I am very thankful to PS Division and Intel for giving me this opportunity.

Aloysius Abreo (2012A3PS207P)

Providing industry exposure to undergraduate students is an amazing concept that has been followed in BITS-Pilani. During my internship for five and half months at Intel I worked in the Client Computing Group (CCG). I'd like to highlight a few important things of my internship at Intel– learning, opportunities, and work culture. The realization that an infinite amount of information exists on the internet and you just need specific keywords to search for it. My mentors at Intel were instrumental in introducing me to new concepts, industry production practices and trade secrets. Understanding how a semiconductor like Silicon is all around us, in everything, is just amazing. I was introduced to something new each day and would go back and research on it. It has instilled in me the habit of questioning everything I come across and understanding the concepts on the way. My project at Intel was based on developing new high speed chip interconnect technologies. It involved working with the RF team. As a part of the project I was involved in collecting lab data and simulating structures on the Ansys HFSS (High Frequency Structural Simulator) software. Since this is a widely used software, using a few tutorials, I could successfully simulate PCB level structures and verify various lab data points. The amount of resources available for learning – Lynda videos, internal documents, learning sessions, industry design verification software and interaction with industry experts in various fields greatly helps in giving an enormous practical exposure and

correlation with academic knowledge. A lot of opportunities are available, it's one's choice what to make of it. Intel, being a multi-national company, has employees working on projects together all over the globe. I've noticed my managers, mentors and other people in the team have meetings scheduled outside of working hours. Although it's a busy schedule, almost every employee I have met here seems happy with his/her job and work hours. Every new hire/intern is assigned a mentor to ramp up into the organization. Everyone is very friendly and addresses one another in a first name basis. The higher up officials are very approachable and helpful. Overall, I can say that I'm very satisfied with my time here and am looking forward to working here in the future. PS-2 has been successful in preparing me for industry challenges and requirements. As a PS-2 station, Intel Technologies, Bangalore is a very good choice for anyone who wants to work on digital/analog hardware design, testing and verification platform development. I express my gratitude to PSD, BITS Pilani and Intel India for giving me this opportunity.

Arijit Bhattacharjee (2012A3PS089G)

I was assigned to the Secure Storage team. Our objective was to identify the various threat scenarios for docker containers and come up with solutions to secure the vulnerabilities in this state of the art multi-tenancy system. During the internship, I learned a lot of things ranging from how Docker containers work to understanding how each and every syscall gets resolved at the kernel level. I was from EEE background, and had little or no knowledge about things like Operating system fundamentals, file handling concepts or even C programming. Working on this project has immensely helped me gain an invaluable insight and skill in the aforementioned areas along with much required practical knowledge which holds paramount importance to succeed in today's technology industry. Apart from technical skills, you gradually learn about the work culture, environment and international ethical standards of your respective field by working in a renowned organization like Intel. The continuous support from my PS instructor and my manager and mentor was a major contributor towards my confidence. During the project we got to learn about IP's (Intellectual Property) other teams at Intel were working on and which we were using in our project. This gave a broad perspective about product development and such an experience is possible only at Intel. In a nutshell, working with Secure Storage Team at Intel was a fun roller coaster of knowledge and experiences that I shall carry with me for the rest of my professional career.

Arza Sai Rithika (2012AAPS072H)

Working as an intern at Intel Technology was quite a wonderful experience for me. Intel being my dream company and bio-medical engineering being my major area of interest, I think I got a perfect combination of both during these five and half months. I was a part of the Intel New Technology Group and as the name goes we were working on the latest technology which made our stay at Intel much more interesting. My project was based on embedded systems applications towards bio-medical field, something I was wanting to work on. To be more specific, I was working on a portable, cuff-less BP measuring device. I was given a chance to work on a few sensor chips alongside working on MATLAB. The mentors assigned to us were a huge support for us. If not for their constant help, the project wouldn't have been a success. When I was first assigned the project, I didn't have a clue on how to go about with it as I was new to the field of

embedded and it was only with the help of my mentors, Vincent Mageshkumar and Amit Baxi I could cope up with the project. Generally, I used to live in a myth that corporate world is completely hierarchical but here in Intel, I found no such discrimination. In fact our ideas though sometimes substandard, were accepted and worked upon by the mentors. New ideas were always welcomed no matter from whom it was. We were provided with a very caring environment. This internship was not just about the project or about the mentors, it was much more than that and was possible only because of the wonderful team. Overall, it was a very educative and a memorable experience. I thank BITS Pilani and Intel Technology India for providing us with this opportunity.

Bandi Sai Surya Prakash (2012AAPS072H)

cThe PS-2 internship is an amazing concept. Students can relate what they learn in institute to what to expect in real world. During my internship for about five and half months in Intel in the Client Computing Group (CCG), I learnt so many new things including technical knowledge such as the work culture and communication skills in industry. I am lucky to be assigned to my mentor, S Arvind. I learned something new every day from him. My project is on optical inter connector but each day we used to discuss on different technology's and devices. I learned so much about designing PCB boards during this period. The time our mentors take out for guiding us from their busy hours is amazing. In the end I would like to thank PSD for providing this excellent opportunity to learn and bridge the academic life to industry so smoothly. I would also like to thank Intel India to give me an opportunity and help me to prepare for industry challenges.

G N Anirudh (2012A3PS200P)

Internship at Intel India has been an amazing experience, particularly the server group in which I was working. The server group is responsible for manufacturing Systems on Chip for server platforms. It is known to be one of the more profitable businesses of Intel. What really defined the experience for me was that whatever I'd learnt in institute was based on theoretical aspects. The learning curve here was pretty steep, especially since the people here expect results. One is expected to familiarize oneself with tools and IPs that Intel makes. The whole idea of designing a SoC draws from the fundamental principles of Digital VLSI Design, Computer Architecture and a bit of Analog VLSI Design. One may work in Integration where you'd be responsible for connecting various components according to an architecture, or validation where you'd test the connections made in the integration stage. Also present is the "back-end" of design, where the layout for the SoC is designed. Apart from the technical part, I got a taste of the corporate culture brewing in Intel. One is expected to take part in the decision making process from the get go. I can say that attending more than a few meetings every day, setting up few of them yourself isn't uncommon. You'd be expected to draw information from silicon architects, domain experts and tool owners. You're also expected to adhere to strict deadlines, although once in a while you may set them for others too. The product I was working on is expected to hit the market in 2017. I worked on the Design for Testability architecture for a server SoC. It's quite remarkable how Intel has taken some basic concepts such as boundary scan, scan chains, BISTs and refined them to suit their needs in their designs. Apart from this they've come up with some novel ways to test circuitry which aren't even known to the general academia. Finally, I am thankful to PS Division and Intel for giving me this opportunity.

Gaurav Garg (2014H123164P)

I have been working here on High Speed Serial Links design. Being an electronics student my passion towards core electronics always has been always high. During my internship in Intel I got to work on some of the latest technologies available in the industry. I have learnt a lot in my last five and half months. Apart from the technical growth, I have also learnt how to work in a team, how to deal with pressure situations and other interpersonal skills. Being an introvert, these skills will help me in my future career shaping. The best thing that happened to me in this regard is that when I joined my internship the project was just in starting phase so I got to learn a lot. Apart from technical aspects, I learnt how to adapt myself, being from microelectronics I always had my struggles with coding and had no experience in MATLAB. So, I got out of my comfort zone and now I feel like I achieved something. I am more comfortable with experimenting now. And I worked with one of the best teams of Intel India and the way my manager and other people supported me is incredible. The team members were very helpful with the knowledge transfer and helping me in case of any doubt. In conclusion I would like to say it has been very good learning experience for me and am looking forward to take it from here.

Gupta Rohan Sunilkumar (2011B1A3705H)

I have been working in Bio Signals and systems lab in R&D division. The title of my project is 'Wireless sensing and Smart glasses'. The project involved work on wireless sensing and learning related to hardware aspects of the wireless sensing. The smart glasses project used piezo sensors for sensing. My project was mostly regarding literature review and finding the right materials for wireless sensing. Initially I didn't get much interest in the project. But as the time progressed it became quite interesting to work. Overall it was a good experience. I learned a lot of professional skills also. This five and half months helped me to learn conceptually and in concise way. I thank BITS Pilani and PS division for giving me this opportunity.

Harshpal Singh (2012A3PS233G)

My PS-2 Station is Intel, Bangalore. I worked here on compressive sensing in wireless sensor networks. Intel India has been in top of list of 'best companies to work for in India', the work culture is pretty good and friendly. The best thing is employees here don't differentiate between interns and full time employees. So the transition from academic to industry was pretty smooth. The team in which I worked uses compressive sensing, a state of the art data compression technique in a wireless sensor network monitoring different environmental variables such as temperature, humidity, pressure etc. The aim was to exploit sparsity of these fields and compress while sampling thus increasing network lifetime. I did all my work on MATLAB and finally produced a GUI that explains the workflow in an intuitive manner. I got to learn how research is carried out in industry as I had to do a lot of literature review and implement well

established algorithms. This internship has helped me in improving my programming skills. More than just an internship it has helped me evolve my thought process from a student's perspective to an employee's perspective. Finally I would like to thank PSD - BITS Pilani for giving me this opportunity.

Jose Joy (2012A8PS249P)

Over the past few months, during my internship at a prestigious organization like Intel, I could learn many things about Wireless sensor networks, Internet of Things, Network Routing etc. I was allotted the project on Wireless Sensor Networks and a new signal processing theory called Compressive Sensing. I was working with Intel Labs, a Research and development lab of Intel. Compressive sensing is a signal processing technique that utilizes only a subset of an actual sensor field, to reconstruct the whole sensor field. The effectiveness of compressive sensing in wireless sensor networks is mostly in power savings and reduced network communication costs. Compressive sensing can be used in almost every wireless sensor network, where the parameter monitored (e.g. Temperature) can be expressed as a sparse signal in some basis. During the initial days of my PS, I was tasked with mastering a software called FloTHERM, a temperature modeling CFD software. I was asked to model a refrigerated chamber. Different anomalies were modeled for a refrigerated chamber as our team was focusing on environment measurement for cold chain asset tracking and we could observe how effectively compressive sensing worked for that model. After that I worked mostly on the algorithm side and also power modeling to understand the expected power savings due to compressive sensing. Using National Instruments Wireless Sensor Network kit, we could implement and check the usefulness of compressive sensing in real life applications. The time I spent working with Intel has definitely helped me get an insight about my possible future career. The exposure to a research wing in Intel also helped me understand how research happens in companies and what R&D is about. Also, various Web Based Training courses I enrolled as a part on Intel Training helped me to understand about office ethics and other useful information. This time really helped me understand about team work in an office environment. Almost every day I used to be part of brainstorming sessions with my teammates. I also met many people from whom I have learned many things over these past few months. These experiences and exposure will really be of use in my future. My major accomplishments include a new invention, which is a smart data gathering algorithm for wireless sensor networks that utilizes compressive sensing. I would also recommend Intel Technology India, especially Intel Labs for students who want to learn more about R&D in wireless sensor networks. I thank PS division and Intel Technology India (Bangalore) for the opportunity they provided me.

K S Gayatri (2012A8PS219H)

My PS-II station is Intel Bangalore. The experience here is nothing but amazing! For those seeking their career in the VLSI industry, Intel is the best place to start with. My interest being hardware section, I found a lot of scope for exploring, learning different aspects and get a hands on experience. You not only get acquainted with the latest technologies, but also get a chance to work on it. For bridging the gap between your theoretical knowledge and practical applications, they provide sufficient training on that specific topic. And if you want to dive deep into the subjects, there is no stopping you, everyone here is very

knowledgeable and always ready to help. You realize how working in an industry is very different from academic projects. The exposure you get makes you into an independent person where you have to work out everything, mostly, on your own. Nevertheless, your mentors are always supportive and make time for you, despite their busy schedule. I was allotted a project regarding over clocking of boards (generally used to gain additional performance from a given component) which has large customer market. My work was to improvise the existing tool XTU, and make over clocking simpler for novice users. Throughout the project, my mentor was always helpful and I used to learn a new topic each day. I conclude by saying that working as an intern at Intel had taught me many things both professionally and personally (character build). End of the day you become a better engineer and a better person. I strongly recommend this PS station to Electronics guys who are interested in hardware design. I thank PS division and Intel for giving me a chance to work at a wonderful place and on a good project.

Karan H Shah (2010HS23067P)

Working for a prestigious company like Intel is always a dream come true for any electronics engineer. As a member of the structural design team at the Mixed Signal IP Solutions group, my responsibility was to deliver comprehensive solutions to all mixed-signal IP designs at Intel which is tremendous. I was responsible for delivering a completely new design flow to tackle late-stage power aware design changes that can be suggested by the customer at any point of the ASIC design flow. The project involved high usage of concepts from VLSI design and CAD for IC Design. To incorporate changes in the power domains and other power intent, knowledge of low power design is essential. Finally, because designing a new flow involves dealing with a lot of tools used in physical design, Perl and Tcl know-how is essential. There was ample time given to gain the required technical know-how. The best part about the internship was that I got to have a lot of exposure to the tools that are used in the VLSI Industry. This, I feel is apt from an internship point-of-view as it strengthens the fundamentals and prepares the interns for the journey to come after institute. Having said that, few groups at Intel like mine do come with a cooldown policy where-in the tool access expires 1-1.5 months before the end of the internship, unless an offer of employment has been made and accepted. Thus, if this is the case I would strongly recommend to consult with your manager and mentor and come up with a project that can be completed successfully in the given timeline. Finally, Intel is indeed a great place to work at. The perks are great for an intern in the VLSI industry and the fellow employees are very helpful and cooperative. The quality and quantity of work given to an intern would surely vary from team to team, but from a personal perspective, I have had a very knowledgeable and satisfactory experience.

Kenil Rupesh Oswal (2012A8PS409G)

Over the past few months, I have learnt a lot- about the organization, about the new technologies that it is working on and also about the skills that are required to work on these technologies. The project allotted to me was a survey of wireless sensing technologies which included Radar, Optical Sensing, Sound and

Acoustic Sensing and to some extent electronic nose. The purpose of the survey was to identify the technologies where we can sense parameters without the sensors being in direct contact with the object. The above mentioned modalities seemed to satisfy the constraint and I was required to compare them and identify the best technology that Intel could pursue. Initially I was a little sceptical of my project as it mostly involved literature survey and I was expecting a more technical project that would actually suit my interest. However, as I started the survey I came across several techniques and products available in the market that actually amazed me. When surveying Radar, there was a product-Inspiration kit by Xethru, which actually measures your breathing rate from a distance using radio waves. We ordered the product and I got a chance to evaluate and work on it. This was indeed very fascinating. On completion of the survey and discussion with the team, we realized that Radar is much better in terms of performance when compared to others, although there are some trade-offs. So we decided to go with Radar technology and procured some Radio modules for our custom application of RF Imaging. Then I worked on the Radio module kit and interfaced it with Arduino for custom control, which interested me the most. The time I have spent at Intel has indeed helped me to develop various professional skills. Often I would have to present my findings to the senior members in the U.S. late at night, which gave a taste of how working life may look like, which is actually a bit exciting. My mentors were really supportive and guided me throughout my PS. I thank PS division for the amazing opportunity that they have provided me. The experience gained here will surely help me in the future.

Madhukar Harsha Karigerasi (2012A8PS279G)

My PS-II internship at Intel, Bangalore was an amazing experience. My team was working on securing Docker containers, which I had no technical expertise of. This was a research oriented project with a very steep learning curve. Things that I had to learn outside my curricula were many, such as working of containers, loader, glibc, hypervisor, Linux kernel development, operating system concepts, cryptography and much more. I ended up acquiring a whole new skill set related to software security. Before this, I was pretty much confined to the theoretical knowledge of hardware electronics and circuits. Most of my time in the project was spent acquiring knowledge online and learning useful things from the employees here. The perks of working here are very high as one gets to work with the best minds in that field as well as superior technology for the project. The team members were very helpful with the knowledge transfer and helping me in case of any doubt. Often, we as a team, would discuss new probable solutions and the drawbacks of using it. My manager supported me on every step and did not pressurize unnecessarily. It is definitely, one of the best team that I have worked with. Working here taught me team work, how to keep calm in pressure situations, deal with road blocks and moreover, nuances in the corporate world. The PS-II experience at Intel will help me shape my career in the future. I also got a technical know-how of various broad domains.

Mohit Agarwal(2014H140129P)

The overall experience was awesome and it has been a great learning opportunity. I have been working here as a part of Software Development team which comes under Hardware Security Group. The team was working on the security of Android Device. I was introduced to various new technologies and programming aspects which gave me insight of how to work in such a big organization. Technically, I learnt a lot of things by working beside a number of Software developers with enormous years of experience. As a part of the team, I was involved in creating and running test applications for the Trusted User Interface (TUI) in Trusted Execution Environment (TEE) for the Android OS. The project involved clear understanding of Android Application Development and concepts of C language to work on the native side. I was given enough time and support to learn the required things and gain enough knowledge to start working as a part of team. This internship helped me to acquire new skill sets and improve my programming concepts. But apart from technical aspect, I learnt how to work in team. The team members were very supportive and generous. My manager and mentor helped me at every stage during the internship period. The team members were always there to help me whenever I had any doubt. Everyone here at Intel is friendly by nature and I never found much problem in making myself accustomed to the environment. Finally, I must say that I was fortunate enough to get my PS-2 at Intel where I learnt how to use theoretical knowledge into practical work in the best possible way in an organization. The stay at Intel also helped me in overall personality development. The experience gained here would surely boost my future career prospects.

Pranjal Kumar (2011B4A3618H)

The past few months at Intel has been a really great experience overall and it surpasses any expectation that you have from a highly reputed company. The training here provides you with exposure not only with the trending technologies but also to the workplaces ethics which helps in overall personality development. As the first day at any new place is over whelming, it was no different at Intel, but my manager, mentor and my team member were very welcoming and it became very easy to adjust. Everyone here at Intel is very friendly and are willing to help you in not just project related problems but any difficulties that I faced at the workplace. The work environment here is very open and flexible and yet maintains that competitive vibe which makes you work smarter and push towards smarter ways of performing task efficiently. My project was broadly based on automation of front end design integration in High Speed Serial IO PHY. Currently interconnecting modules in a design is done manually. This not only takes up a lot of time but also increases possibilities the errors and leads to increase in verification time. My tasked was to create an automation script which can perform the integration automatically using a set of predefined rules. It helped me to explore the latest tools that are used in the entire industry and expand my knowledge. In the end, I was able to make a new tool which reduced the design time by around 40%. The tool was generic enough that it is being implemented in other projects as well. Lastly I would like to say that Intel has been really helpful in transitioning me from academic life to industry life and helped me put all the theoretical knowledge gained at the institute to practical use.

Pratishtha Shukla (2011B4A3634H)

Internship at Intel India Pvt Ltd, Bangalore was one of the best learning opportunity for me. I worked as a part of the verification and validation team for five and half months and obtained a mammoth amount of knowledge and experience in both technical as well as overall development. All the team members provided the same treatment as an employee and helped me adjust to the corporate culture at Intel. Initially it all seemed high level and I was skeptical of being able to match up to the expectations of the team as a part of one of the most widely reputed electronics organization. As time passed, I started getting comfortable with the environment and also got a hold of how things work here at Intel. I was assigned a mentor who helped me to ramp up with the work space, access and other technical formalities. Soon I was assigned a project and my mentor guided me thoroughly well enough to make my way in the methodology of the work. The project was about developing an OVM based verification environment to be able to perform the functional verification of the design under test and obtain a respectable coverage to avoid costly re-runs. Without it, saving time and improving the verification effort by covering all the difficult corners of the design and attaining maximum possible coverage will be tedious. Thus my project constituted of development of test bench and verification of the Design under Test (DUT), if it works in accordance to the specifications or not, to trace the origin of fault from the output appearing and to help debug the issue. For complete understanding of the work, any doubts I had were cleared by my mentor theoretically so that I could get a hang of how the verification industry works. On the other hand, team meetings, outings made me accustomed to the wonderful environment that prevails in Intel and how opportunistic and amazing the work environment is. I was fortunate enough to be allocated this not only a highly reputed company but also one of the best place to work. In a nutshell, these five and half months of PS-2 instilled in me the sense of utilizing the theoretical knowledge to practical use in a friendly, happy yet competitive environment. This experience helped me add to my personality in the best way possible.

Company: ARM Embedded Technologies, Bangalore

Amoghavarsha U T (2014H140039)

The five and half months at ARM Embedded Technologies Ltd, Bangalore has been a rewarding experience. I am grateful to the BITS Practice School II division for giving me this opportunity to be a part of such a prestigious organization. I was a part of Performance Analysis team in ARM whose output is directly fed into the CPU design and marketing teams. A good understanding of the process of characterization of benchmarks was achieved during the course of this work. Working on a wide variety of benchmarks and how their behavior changes with different architectures and different compilers was studied and analyzed. An analysis was carried out on different open source compilers such as GCC and LLVM and a proprietary compiler from the competition to understand how these compilers behave with different benchmarks and different CPU architectures. Differences in compiler performances were brought out across architectures. A sound knowledge of how different levels of optimization take place in compilers has also been acquired during the course of this work. A user configurable automation framework was designed and implemented which drastically reduced the amount of human efforts

involved in building, running and passing the benchmark results. Further, an understanding of the SPEC benchmark suite was gained. A brief characterization of the SPEC CPU 2006 suite was also conducted. A bit effort was involved into the automation of SPEC as well. This was followed by a performance comparison of two flagship devices, one being a device with high performance ARM CPU core and the other device with Competition High performance–Low power CPU core with similar hardware and software specifications. Both of these devices were aimed at high performance computing in the embedded market. A clear perspective was achieved on the relative performances and differences in them. Also, most of the work in the team involved sensing of the raw data that we get. This seemed very interesting and kept me engaged all the time. During the period of this work, a tremendous amount of knowledge has been gained at a personal level in the areas of Computer architecture, Computer software programming and CPU performance analysis. One thing that is of utmost importance, but often overlooked is the support of the team and the mentor in the organization. I was lucky enough to have my mentor guide and help me in every phase that I spent in ARM.

Depa Tejasree (2014H140035H)

Working with ARM gave me a practical exposure on physical design flow of processors. It was a great learning experience interacting with people at ARM. I was part of performance optimization team of physical design division at ARM which worked on optimizing SOC designs to meet the Power, Performance and Area (PPA) requirements. My project initially involved working on the memory instances of different corners. The memory instances were given by the memory compilers. These memory instances of different product lines involved different configurations and different values. Tcl scripting was done to grep different timing, power and area values of these instances. The instances out of the tolerance bounds were identified. And the instances suitable for the required PPA were taken along with Cortex-A class processors. The second part of the project involved working on design and IC compilers of Synopsys implementing design flows. Different low power methodologies were experimented. Optimized flow was derived to meet the PPA needs of SoC. These five and half months at ARM helped me improve my skills in the designing, VLSI, Digital electronics, low power implementation, Tcl scripting and work with different compilers. As I was new to scripting, initially I had some troubles with scripting. But writing different scripts, practicing frequently helped me learn faster. This internship helped me to not only improve my technical skills but also improve my team, presentation, and problem solving and people skills. To conclude, I would say working at ARM was a knowledge gaining experience.

Kambham Vivek Shankar (2014H140036H)

My internship at ARM Embedded Technologies Pvt. Ltd., Bangalore was a pleasant experience. The most important thing that I have learned is environment in industry is completely different from academic environment. New skills should be acquired every day. There is no spoon-feeding, skills should be developed on our own. Working hard and completing things before deadline is the motto. I worked with system Verilog by learning from scratch. Language manual is the best resource as not much information is available on internet. Good knowledge of C++ is required. After a couple of months with System Verilog,

I was shifted to another team. Here I created various Perl scripts for data extraction and management. Overall, it was a wonderful experience working at ARM. Managers and mentors were friendly enough to guide me and polish me through the course of internship. I had a good exposure to how industries work and the working environment. I realized that applying knowledge is more important and useful than remembering things. This internship has changed my perspective of how knowledge should be pursued-- by applying and experimenting, rather than studying and remembering.

Sanya Mathew (2014H140041H)

The five and a half months at ARM Embedded Technologies Pvt. Ltd under SYEG (System and Software Engineering) department was an excellent opportunity for me to gain some hands on experience in the embedded engineering field. It provided me a chance to work as an engineer in an industrial environment where I can utilize best of my knowledge and acquire new skills to implement real time applications. The project work of System Validation using Operating Systems which aims to validate ARM platform based subsystem by running Linux, along with user space applications, on a variety of hardware configurations helped me to enhance my knowledge of both hardware and software engineering. This project intensified my skills of programming in C, Assembly language and also my prior understanding of computer architecture along with acquiring knowledge about ARMV8 architecture, bootloader, Linux operating system, concept of virtualization, emulator based runs etc. It also improved my debugging skills. The other phase of the project work which aimed at creating a unified virtual platform file for virtualization provided me an opportunity to familiarize with m4 macro processing language and scripting language (Perl). It helped me to get deep understating of the concept of virtualization, its advantages and how it is being implemented to enhance the resource utilization. Other than the technical details this internship provided me the chance to learn to work in a team based environment where a task is achieved by sharing knowledge, ideas and opinions. The internship was also good to find out what my strengths and weaknesses are through the continuous guidance, support and feedback from my mentor and other members of the team. This helped me to define what skills and knowledge I have to improve in the coming time. Overall it was a wonderful experience spending a productive time during the entire internship. Completing the assigned project work and providing the expected output within time limit boosted my confidence and believe in myself. I had found that my ability to absorb and learn the technical and non-technical aspects of work life in an organization has drastically improved, as well as my time management ability and I am sure that this will help me in my future career growth as an engineer.

Tarani Gaur (2014H140038H)

As a part of PS-2 program, I got this opportunity to work in one of the most prestigious semiconductor company - ARM Embedded Technologies Pvt Ltd. Bangalore. I had a great experience working here as an intern. This not only improved my technical skills but also helped me grow as a team person. Here, I worked with the System Verification Tool Development Team where I was assigned two tasks. Initially, I

was required to develop plugins in C++ to capture information which would aid the verification of the tests being run on the models. These plugins would be helpful in getting useful data from the trace sources provided by the model. Such additional trace information obtained would help the System Verification Team for debugging and also the tool developers to measure the coverage data and tune the tool appropriately if a coverage criterion is not met with the initial design of the tool. Working on this eventually, improved my coding and debugging skills. I also learnt about the ARM architecture and the functional verification process. Another task was to optimize the compilation flow of the tool. For this I was required to write scripts in Python and also make changes in the tool build script. Through this second task, I gained knowledge about Python scripting language and also came to know that what is a build utility and how changes can be made in that. This was my first industrial experience and it has actually given a chance to observe the differences in working on a project in the university as a student and working with professionals in a team on a time critical project. While working here I learnt to give more stress on all the possible failure cases that could be possible while running an application which I was not doing as a student. Enhancing technical skills is only one aspect. Another important aspect is the growth as an industrial person. I learnt many things from my manager and my team members like how to tackle difficult situation in case our application fails, how to handle the projects calmly and with determination, how to supervise and guide others; and also interaction with others. I also got an opportunity to showcase my creativity through a FUN Outing at ARM Presentation Contest where all the interns have to form a presentation or a video about the outing day. And I was the winner of this contest. Overall, I would say that I will cherish this time at ARM because this has brought a huge change in me not only as a technical professional but also a team player.

Vishal Thakre (2011B4A3565G)

During my one year of internship at ARM, I have been part of the Memory Team. Courses studied on-campus like Microelectronics and ADVD were put to great practical use during this period. The work culture is the team is very good and the team members have been always helpful. Most of the employees working in the memory team are having many years of experience, thus I learnt a lot from them. This internship also gave me the perspective of what changes we should expect when moving from theoretical study to practical applications. I have improved my basic understanding of MOSFET's, Leakage Analysis and SRAM Compilers during my project term. This experience would help me in future for career in physical design.

Company: ARM Embedded Technologies, Noida

Raghav Chaudhary (2012A8PS342G)

ARM being my first internship, I had many questions in mind. How would I solve industry level problems? As an intern, how will I fit into the organization? Would I be able to meet my mentor's expectations? With time though, all questions got answered. Yes, the work here can get tough, but there is no dearth of guidance as well. I could take help from almost anyone I was comfortable with. Here, at ARM, you get to

interact with people who are driven, persevering and talented (and fun-loving at the same time!!). There were intern engagement programs, where I got a chance to interact with the managers, discuss with them about the nature of work in the semiconductor industry in general, and even discussed at length my plans for the future. The work-force at ARM Noida is a blend of youth energy supported by experienced minds. With time, I realized that at ARM, all you need to start with is strong fundamentals, and an open mind. The rest will be taken care of with time. Our work at ARM Noida focused on SRAM design. We first learnt about the fundamental unit of SRAM, the SRAM bit-cell. We became acquainted with its modes of operations, and stability issues. We learnt to quantify SRAM stability. It was a leap from the theoretical world of textbooks, into the world of the semiconductor industry, where the focus is on solving problems of (sometimes) mind boggling complexity. The work required us to revisit the basics of digital VLSI and transistor theory, as well as some statistics. We also had to read several research papers. In the process, we entered the realm of nanoscale transistors and learnt about important effects not seen in the micrometer domain, which are crucial to good SRAM design. We were also trained in writing UNIX Shell Scripts, as well as in Syopsys HSPICE, to run bitcell simulations. For three weeks, we were trained in CADENCE XPS and Finesim simulators so as to run margin analysis on an entire SRAM instance. In the process, we also learnt about basics of SRAM architecture. Work here imparted us not only with knowledge, but also the temperament to stick to difficult jobs. At ARM, I learnt the value of discipline and teamwork. Industrial projects are nothing like college projects. Here, the problems are complex, and very difficult to debug individually. Regular interaction with colleagues is an essential ingredient to success. It takes months to build up on a successful project, and without a healthy relationship with team members, it's simply not possible. Finally, I would to extend my gratitude to the PS division for providing me this opportunity to work in an organization of such prestige.

Company: Broadcom India Pvt Ltd, Bangalore

Prathiba Rao(2011B3AA513H)

I worked in the V3D team here. V3D is a 3D graphic processor core which is used in various Broadcom chips for set-top box systems or multimedia systems. This team comes under the broad group called Broadband and Connectivity Group of Broadcom. Thus working here has been an amazing experience with the opportunity to learn real industrial projects. I have gained the basic knowledge about set-top box, video and audio encoding and decoding techniques and the general flow of any project. Since I am working in the verification team I initially got a project related to power analysis of the V3D core. I learned Perl scripting and wrote a script to get the power values and store into a database from which it can easily be accessed for analysis. The second project I did was to decode a .gd file again using Perl Scripting with the help of architecture specification of the V3D core. During this project I got to learn a lot about the architecture and about the operations inside a quad-core processor. I also got to learn about the graphic processor's parallel computing concepts. Thus these two projects related to V3D core helped me to get a good idea about the core architecture, functions and power consumption. Apart from the projects themselves, the environment of verification taught me the methodology of verification, simulation and regressions, testing etc. By working here I learned that the level of complexity and abstractness is very high in the real world working designs and modules. These five and half months experience in a core company has opened up the different paths which I can take from hereafter depending on my interests. I

know what skills I would require to work in industry and have already started to learn them here. I am continuing at this PS-2 station for next 6 months as I can see a lot of opportunity to learn.

S Murali Krishna Sai (2011B3AA375H)

I was in Hardware Development team at Broadcom Limited, Bangalore. The major learning during my internship is how post silicon validation is done in Semiconductor Industry. My work involved writing scripts and validating chip. Thus, using many instruments and controlling them using the script such as Satellite and cable modulators, Spectrum analyzers and Network analyzers. The people here are very helpful and co-operative in case of any doubts. Lab work is very interesting as any signal can be seen at any point in the Board. We can see how signal is getting encoded and decoded and Constellation diagrams for decoding. All theory learnt in the institute, you can correlate how it is implemented in the set top box. The interesting part is we can design whole test and see it working. It was an amazing experience as I learnt a lot both technically and professionally.

Santoshi (2011B2A3563H)

During my internship at Broadcom India Pvt. Ltd., Bangalore I got a first-hand experience of what happens in a typical day on the verification engineer job. I learnt how important the verification is to industry. It not only involves just verifying the design, it also involves various development works to test the design. It also gave me an opportunity to understand how differently the things are done at academic and industry level. Got to learn about various aspects of the industry from the most experienced people and their valuable insights into the industry. Finally it gave me a very good opportunity to choose my career interests and to understand how the industry actually works.

Tejas Bhalla (2011B1A8862P)

The major learning in my PS-2 duration is how a chip is designed in an industry. I got a brief understanding of the entire process, right from the point where the customer gives out his requirement until the chip is taped out. Being a part of the physical design team, I mainly focused on learning the physical aspect of designing the chip. I learnt the flow of the different tools like ICC, AP and how one has to achieve the desired results using them. It also helped a lot in the transition from academics to industry. The job done in an industry depends on inputs from other teams as well as other companies which design the tool. I got this experience from my internship. My take back from industrial experience is how competitive one has to be. People constantly strive to innovate new products, new methodologies, which can make the life of community easier. The ability to constantly accept new challenges and achieve the desired

outcomes on time is what I would take back from my experience here. I learnt about how the technology has scaled down in semiconductor industry, what all challenges were encountered in the path and how they were overcome. I went through journals, explored the tools used by my team, learnt about the techniques used at 16 nm technology node. My experience here gave me more insight on things that interest me and what I would like to pursue in future. It gave a feel of how a technical job looks like and what all it takes to be successful in the same. This will surely shape all my future endeavors. For now, I plan to stick in the same industry and wish to work on different platforms & different projects.

Thumkunta Anusha (2011B2AA687H)

The major learning's during the internship process were on the IEEE 802.11 standards and WLAN protocols especially the MAC protocol. I have learnt the importance of MAC (Medium Access Layer) which is a sub part of Data Link layer which is the second layer of OSI. It was interesting to learn the way MAC considered to be as a micro-controller and the way it functions and how it is used in case of coexistence of wireless devices. As in the present world wireless technology has been widely accepted by the users instead of the wired network. With the increasing demand of wireless networks both WLAN (Wireless local Area Network like Wi-Fi) and WPAN (Wireless Personal Area Network like Bluetooth) which occupy the same frequency band, interest has been developed in studying the Coexistence technology. The coexistence of WLAN and Bluetooth results in mutual interference between them as they are present in the same ISM 2.4GHz frequency band region although they use different technologies. The interference between them lead to the significant degradation of performance of both. I learnt the problems causing the interferences, coexistence issues and also coexistence solutions that have been developed. The theory I learnt from the institute through subjects like Communication Networks, Modern Communication systems (Wireless communications), Microprocessor, and Computer architecture helped me to understand the basics of the project. This internship experience has taught me how to analyze in various ways, being friendly with all and discussions with seniors has increased my knowledge. I learnt about the concepts of Bluetooth and its functionalities and treating WLAN like station, soft AP, P2P devices. Apart from Wlan-Bluetooth coexistence I also learnt certain basics on WLAN-LTE coexistence and about LTE concepts and its functionality. Overall experience of PS-2 helped me to know the field of my interest and understood that Networking and Wireless Communication field would be my best career option compared to any other field.

Company: Qualcomm India Pvt Ltd, Bangalore

Ayush Agarwal (2012AAPS189H)

Qualcomm Inc. has been a great place to learn about the semi-conductor industry. Being the leader in this industry, the work has been structured in a well-defined manner. There are numerous teams working from the inception of the project to its final production for OEMs and hence encompass all stages involved in semi-conductor production (except fabrication). My work was in the System Performance Team which is a post Silicon team that experiments after a SoC has been taped-out and a few units have been produced

for internal verification. part from the routine tasks involved in the department, I worked on a project that was aimed at reducing power consumption in a SoC. A new approach of resource allocation was researched, proved and prototyped and a considerable reduction in power consumption was observed. Throughout the internship, I have had the opportunity to enhance my skill-set. Existing skills in my field have improved tremendously; a hands-on experience with many activities in a semi-conductor company has helped sharpen my understanding and knowledge on those aspects. Apart from that, I have learned great deal about various other interlinked fields like Mathematics and Computer Science, I have learned courses like Machine Learning, OOP languages like JAVA, scripting languages like Python and Perl, other tools like Android Debug Bridge and Android Studio, a lot of LINUX concepts. In addition to technical aspects, I have learnt a lot about professional ethics, workplace etiquette, soft-skills like communication, presentations, interaction with other professionals, team work and so on. The wok culture in Qualcomm is very good. The workplace is friendly and one has a good opportunity to learn from the best. There are a number of internal conferences, summits, and other platforms toshowcase breakthroughs. There is constant motivation to innovate and a high importance to intellectual property. Individuals are rewarded for their efforts. During this internship, I received the "QualStar Diamond award" for my contribution to the project. An internal paper presentation conference has accepted our paper on the same where I am a co-author and a patent has been filed on the utility/design and algorithm of the project where I am one of the innovators. Overall, it has been a great experience to learn technical, professional and other skills. In my opinion, it has been a symbiotic relationship, this internship, and both the company as well as me have benefited from this association.

Ankit Mahajan (2012A8PS308P)

I was included in the Graphics Systems team at Bangalore Design Centre. As my manager knew about my inclination for design, he gave me a design-oriented project based around the modification of some of the architectural features in the GPU. The task was to analyze the performance-area tradeoffs achieved because of the new modifications in the GPU pipeline. It was a challenging project, one which required me to come to terms with the all the specifics of the existing architecture. The technical skills required for the project were a thorough understanding of Verilog HDL and System Verilog. Since the project was design-oriented, the initial duration of the internship was spent in getting a good idea about Qualcomm GPU's architectural details and the different bus protocols along with other technical details. After getting acquainted with the technical specifics, we started work on the design of the new modified architecture. My project supervisor, Mr. Rakesh Dewangan worked with me and ensured that all the hurdles that I faced were overcome. After completing the design, the simulation and subsequent verification that the design was working correctly required quite a lot of time. Apart from gaining in technical skills, I also learnt about how to conduct myself in the organization. It was very important to initiate things yourself rather than waiting for things to happen. I enjoyed working with my team members who were always ready to help me whenever the need arose in spite of being busy themselves. I learned how to work alongside other people and learned the true meaning of teamwork and how important colleagues are in an office space. My communication skills underwent a considerable improvement. The PS-2 at Qualcomm has been an enriching experience which has imparted me with both technical and soft skills. These six months have introduced me to new friends and have left a big impact on me. I am technically more capable now than

I was six months back and I feel that I am fully equipped to tackle problems in the industry after this experience.

Deepak Sugadan (2014H123025G)

I was given projects based on leakage power profiling and design verification. Leakage power profiling of is a process of estimating the leakage power statistics of a design. A proprietary Perl script is used to do the leakage power profiling. The script when executed for a particular design netlist will generate a leakage power report. My task was to extract relevant data from the report and put it in a way that is easy to read and present. These tasks were done in UNIX/LINUX operating systems so, familiarity with the command line interface of these operating systems is required. Along with that the knowledge of Perl is also very much helpful, though not mandatory, as using Perl a lot of the tasks can be automated. The second task was in the domain of design verification. I was asked to generate code coverage report for the test cases that were used for the project. So to do that I had to first understand the relation between the directories and files that were present in the verification environment (directory). For that I need to go through the concepts of verification methodologies and System Verilog. After getting an idea of the verification environment I had to understand how to use a simulator to run the test cases and enable the code coverage report generation. The code coverage report is an in built feature that comes with all the simulators. Here I studied modelsim simulator to generate the code coverage report. Being a large company the IT infrastructure requires a bit getting used to. Once familiar with all that generating code coverage is a rather simple task. The PS-II was a great learning experience. I was received into a very welcoming team. My team worked in the Front-end design of DDR-PHY. Every intern here will be assigned a team and a peer buddy who will be the mentor as well. There will be a team manager to whom I had to report. The skills that I need for the assignments where UNIX/LINUX familiarity, Perl and System Verilog. Others that I needed were company specific tools for which I received help and support from my entire team. There are lot of study material available in the company's intranet so I learned most of them from there. Of course, internet is also available. Qualcomm, Bangalore is a wonderful PS station. All the basic facilities including transport are provided by the company itself. Two weeks of initial stay is given for finding accommodation. The products they make are seen in ads and reviews of mobile phones which gives a sense of satisfaction because the work you do is directly affecting the society around you.

Jajala Shashank (2012A8PS385H)

I have been working here as a part of Validation and Integration team for Application Processor subsystem. Past five months have been an amazing learning opportunity for me. I was introduced to various embedded programming concepts and was provided with a platform to implement those concepts. The project involves developing different test cases to stress FPU, implementing JTAG Less Framework. Stress on FPU involves developing algorithms in such a way that it covers almost all registers of the FPU and all the FPU instructions. This helps to catch FPU related RMA's. JTAG less framework involves developing framework so as to remove dependency on JTAG for low power mode tests and also to catch reboot type issues. Apart from learning various embedded programming related concepts, I have also realized how working in industry is different from academic projects. Here in my team validates and rectifies if there are any issues in post silicon process. I got to learn how industry works and how different

it is from what we learn in our courses. Things taught in college are just not enough. The industry is working on feats that are a century ahead of what is taught as academics. Sure, the basics are still the same; but constant learning is not a myth- it's the very reality we exist in and PS-2 has just been a reminder of the same. PS-2 helps one to build their personal, knowledge base and interact with industry experts. The experience at PS-2 - if not affect my future career prospects - has at least made me aware of the current industry standard and situation and that adds to better chances at scoring a workplace. We also got an opportunity to interact with and learn from many people who already have a lot of experience working in industry. So I would say this is a very huge opportunity which will not just add to your resume but also to your life and nobody should miss this.

Nishant Suryavanshi(2014H124075P)

The last five months have been a great experience. Even though I was from communication engineering I chose Qualcomm's Bangalore center as I was keen to know about the VLSI industry that how the things work there and what are the difficulties faced in the industry. I was part of the timing team which is a part of physical design team. The work mainly included the generation of timing reports and analyzing them and getting the paths which are violating the timing constraints so that they can be corrected. Apart from that I also worked in some experimental kind of work in which I calculated the delay values of inverter cells of low threshold value and high threshold value. I also plotted the graphs to show their behavior and compared the values with library values to verify them. I also worked for the calculation of jitter. Apart from the gain in the technical knowledge in other field apart from communication engineering, the PSII experience have made me realized how working in industry is different from academic projects. In industry there is a lot of emphasis on correcting the corner cases associated with a given program. Practice School experience has also helped us become familiar with the required professional attitude and the working environment of companies. We also got an opportunity to interact with and learn from many professionals who already have a lot of experience of working in industry. The constructive feedback from them has helped us in developing new skills as well as refining other skills. Hence Practice school has provided us ample opportunity to implement the techniques learnt in classroom as well as learn new concepts. I sincerely believe that due to this hands-on experience we are now better prepared for the future and experienced gained here will help in smoother transition from academics.

Prashanth Prasannakumar (2014H123029G)

My time spent at Qualcomm India Pvt. Ltd. as my PS station has been educative. I got to learn a lot of new stuff pertaining to my domain such as programming in Perl and TCl. I have been able to mold myself to industry standards. The internship taught me to drop the habit of procrastinating till last minute. The practice school division gives a great opportunity to learn and acknowledge the differences of academic and professional life. I have also learnt how to utilize my time and resources effectively. The knowledge base provided by the internet is huge and the level at which things are explained is as simple as it gets. In

addition to this, helpful mentors make the entire experience worthwhile by their constant support and eagerness to help us out. I have worked on a project wherein I was required to prepare a script for the comparison of LEF directories. It took a lot of effort and testing for it to arrive at where it has reached now. I am thankful to Practice Scholl division for providing such an opportunity.

Preeti Kumar (2012A8PS446P)

I was a part of the hard macro physical design team for the modem subsystem. This team is responsible for all the steps involved in the physical design that include floor planning, placement, clock tree synthesis, routing and physical verification for all the blocks comprising the modem subsystem. As an intern, I was provided ample time and resources to understand the processes involved in Physical Design and get a grasp of the tools that are used in the same. I was required to write scripts in Perl and TCL, besides working on tools such as Cadence First Encounter, Synopsys ICC2 Compiler, PrimeTime and Mentor Graphics Calibre. After every step in the physical design process, the data was carefully analysed to check violations and solve them. My mentor provided me with the right amount of guidance, giving me an overview of what was expected of me and allowing me to come up with solutions to solve problems. I implemented placement, CTS, routing, PV, CLP on certain blocks of the subsystem. I checked errors and violations arising out of these steps and studied the reason behind their occurrences, besides working alongside my mentor to fix them. Six months at Qualcomm provided a glimpse into the working culture of the company and the expectations from employees. I had the chance to interact with professionals having several years of experience, and get an insight into their approach towards tackling problems. Working with efficiency even under pressure is something I could witness in Qualcomm. Despite all the hard deadlines, my team always lent a helping hand when I was stuck in a problem and patiently answered the questions I put forth to them. Overall, the experience gained in Practice School 2 is an eye-opener to the requirements of the industry and helps us develop skills in addition to our classroom knowledge.

R V Ravina(2014H123028G)

Practice School has been a great experience here at Qualcomm Bangalore. I am part of the Memory Compiler group where I work in the CAD team. We deal with the EDA tools used by the entire memory compiler group, providing frequent performance checks, optimizations and updates which requires us to be on our toes at all times. Scripting skills were required of me, such as PERL and SKILL. Everything else about memory compilers I learnt through their internal documents and datasheets. Getting in the flow of the work does not require much time, a few weeks were enough for me. I was given simple tasks in the initial weeks of the internship as part of the learning process. My work here consisted of different automation tasks whose results were immediately incorporated into their current workflow. These automation help reduce considerable time and effort required by the engineers. I got the opportunity to work with different team members for each of the different tasks and I learnt many valuable concepts and approaches. I attended a couple of technical seminars/workshops conducted at Qualcomm which helped improve knowledge gained during the M.E. program, a view from the industry-side. Apart from these there are a good number of online courses and on-demand courses available within the Qualcomm network, we can learn from.

Ramudu Kolisetty(2011B2AA678H)

I got the opportunity to pursue my PS-2 at Qualcomm, Bangalore. I worked in Power Delivery Network (PDN) team, a part of Physical Design Signoff department under the Supervision of Biswajit Patra, Principal Engineer. I worked on analyzing INRUSH Methodology which involves understanding three important parameters - domain-wakeup time (from sleep to active transition), the inrush current when power switches are turned on and voltage drop due to the inrush current and further the above parameters are calculated using circuit simulation (HSpice) by incorporating the design data using Prime Time (PT) tool. Usually the power-rail is shared by one or more blocks in which one will be always-on block while others are switchable blocks. When switchable blocks are turn on for the first time, the power-supply rail may see a sharp transient droop in voltage due to package inductances and resistances; this can be fatal for their functionality. The voltage droop is to be set within the limit specified by timing team (Usually 5% of the supply voltage). This is achieved by staggering the blocks which results in delaying the block turn-on time at a given instance. The project requires a good understanding of circuit simulation using Hspice and timing analysis using Prime Time (PT) tool. Basic knowledge about Physical Design aspects is very much essential and apart from it scripting language like Perl, Tcl is required. I had been worked on Hspice simulation during my fourth year project which made my job much easier. My team members helped to learn Physical Design aspects within short duration with presentationsand also one-to-one interaction. Since Prime Time tool is much easy to understand from the Synopsys user guide, I could learn easily. Through this program, I had hands-on experience to work on latest technology nodes which includes 28nm and 10nm while interacting with industrial experts. Academics thought me the basic concepts and the practical applications and scope of it, I understood more in depth through industrial experience. This gave the confidence that empower me to tackle any problem at hand. This attitude I feel will be important when I will be responsible for a complete project in the future. The constructive feedback from my mentor and manager has helped me in developing new skills as well as refining other skills. PS-2 has provided me ample opportunity to implement the techniques learnt in academics as well as learn new concepts. I sincerely believe that due to this hands-on experience I am now better prepared for the future and experienced gained here will help in smoother transition from academics.

Shruti (2012A8PS352P)

I was a part of the SoC physical design team working on the top level center tile of an LTE modem chip in 10 nm technology. As a part of this team, my work included tasks that come up during the various steps involved in the physical design of a digital VLSI chip, namely, floor planning, placement and routing and clock tree synthesis for all the center tile of the modem chip which is basically the top level integration of all the other hard macros in the design. As a part of the project, I learned to work with two tools for digital VLSI chip design: Olympus Soc by Mentor Graphics and Innovus Encounter by Cadence. I attended a workshop on Innovus organized by Cadence at Qualcomm to get hands on experience with the tool. I also

learnt two scripting languages Perl and Tcl. My main responsibilities included writing scripts to automate various steps in each of the physical design phases, creating multiple floorplans of the center tile design and firing placement runs to converge on the optimal floorplan and firing CTS runs to name a few. Apart from these, with the guidance of my mentor I carried out few experimental tasks such as CTS experiments to analyze the causes of high congestion and suggest remedies or detecting where manual or script would work better than the EDA tool. These experiments are a good starting point in avoiding/ overcoming some of the inefficiencies that creep into the chip design. All the tasks assigned to me came with hard deadlines and helped be learn how to work efficiently under pressure. My mentor, Mr. Pavan Karidi, guided me with patience. He gave me ample opportunities to learn and come with the right solutions. In these six months I got an insight into the workings of the VLSI industry and the processes involved in designing the chips which are used widely in our mobile devices. I had the opportunity to interact with the professionals, learn about their approach of tackling challenging problems under the pressure of hard deadlines and experienced a part of it. The industry experience gained through PS-2 helped me develop skills crucial to working in the VLSI industry in addition to the knowledge I garnered in college.

Swayam Pattnaik (2012AAPS040H

The major learning that I acquired in my 5 and half months of exposure at Qualcomm, one of world's most prestigious companies, are twofold. The first was the technical aspect of things and the second was of character building. The technical aspects include learning in depth about scripting language and further implementing it to automate various work flows. The industrial knowledge about how testing has helped me see electronics in a new light. Apart from this aspect, the humility I saw in my mentor and his colleagues has left its impression on me and will help me go a long way. This time period has definitely prepared me for a future in the industrial side of electronics engineering. The immediate exposure to real life problems in the industry along with responsibility attached with the work that I conducted has left me with a sense of professionalism and taught me office-work ethics. The project I was working on mainly involves coming up with a new architecture to catch hold of address bits that are faulty in real time. The sheer magnitude of the project appeared daunting at first but over time, under the guidance of Anand Bhatt, Arvind Jain and Nishi Bhushan Singh I learned to focus my problems and solve the problem at hand one step at a time in a swift but organized way. This gave me the confidence that will in the future empower me to tackle any problem at hand. This attitude I feel will be important when I will be responsible for a complete project in the future. In my time here, I learned how to work alongside other people and learned the true meaning of teamwork and how important colleagues are in an office space. From my seniors I learned the way to guide a person working under me. The way my mentor listened to my doubts and provided me with the right amount of help, not too much but just enough to set me in a path of self-discovering the solution. I would like to round by saying that working at Qualcomm has left me stronger both cerebrally and spiritually. This has been an experience of a life time and has definitely made a better engineer and a better person. My major accomplishments include not any medal or certificate but the trust and confidence that my mentor showed in me while doing the work load. My ability to solve the problems in the way advised and also in the time allotted is definitely an accomplishment for me

---

Paavni (2012A8PS319G)

PS-II has been an amazing learning experience in Qualcomm Bangalore. I learnt the nuances of working in Electronics Industry and its aspects. We were allotted teams and mentors on the Orientation day itself. I was given the Simulation Team. Being in this team had different kinds of challenges. Since B.E. curriculum focuses more on physical design rather than verification, I got to learn a lot. I learnt various aspects of verification, DFT and ATPG. Also the various fault models and how they affect in Pattern Generation flow. I automated many simulations for frequency and data rate checking. This being a real world problem had to withstand many non-idealities and environmental jitters. We were a total of 23 interns from all different colleges in India. Meeting them gave us a lot of exposure and knowledge about the curriculum and technical know-how. Also, the mentor, manager, team leads as well as each and every member of the team have wonderful ideas and conceptual clarity. Interacting with them was the best experience ever. The most interesting thing to learn from them was the way they debug a problem. Or how they approach an incorrect output and reach till the grassroot level. We also got to know the whole flow starting from chip design to manufacturing. Apart from all this, we learnt how the industry functions. The hardwork, the sweat, the pressure, the overtime which goes when the deadline approaches right before tapeout. Everything is enthralling. In a nutshell, this journey can be defined as one of the best experiences before stepping out as an employee.

Sharodiya (2012A8PS397H)

In my last 5 a half months at Qualcomm, I spent the first few weeks learning new concepts from Qualcomm's online training videos and workshops. In the following months, I began contributing to the ongoing projects in the Verification stage. Following are the topics I spent time learning in the first few weeks as part of the DV (Design and Verification) Department's onboarding process.
•	Introduction to UNIX Programming
•	Qualcomm's specialized software for compilation and execution of programs
•	System Verilog
•	Universal Verification Methodology
•	Clearcase and Clearquest
I spent approximately one week on each of these topics. This included online video lectures and completing lab exercises in the course as well. For a few topics there were a few instructor-led classes going on in Qualcomm, which I attended as well. Apart from this, I also read through a few books from Safari and watched the online videos on Lynda.com Once my onboarding process had completed, I moved on to start working directly on the ongoing projects. The first project was already completed. I was given the simulated waveforms which had an output error. I had to determine what was causing this error and rectify it. This was to prepare me for debugging, which is a major part of verification. Once I had successfully completed this, I started working on an ongoing project for which I had to generate the waveform files for 16 testcases. I proceeded to do this from scratch and delivered all the testcases on time. The third project required me to deliver waveforms for 7 testcases. Since then, I have been working

on a fourth project in which I had to generate waveforms for 6 testcases to showcase three scenarios in the processor - one idle, one with transactions enabled and one with clock frequency decreased for reduced power consumption. This being a new project, with the aim to reduce power consumption significantly from older versions, requires multiple runs to achieve the desired result which makes it time consuming. Overall the experience has given me a very good understanding of the core VLSI industry.

Company: Texas Instruments (I) Pvt Ltd, Bangalore

Rishabh Gupta (2011B2A3512G)

I was an intern at TI for about a year and worked in the Audio Software team. My primary projects involved optimization and development of algorithms for DSPs, modeling of non-linearity in MATLAB and SIMULINK and tuning and characterization of micro speakers. I have learnt a lot in the last one year from people in my team and other teams in TI as well. I think the most important takeaway was the fact that TI helps develop skills like teamwork, problem solving and critical thinking through various projects. Since these projects are often in uncharted territories, we are continuously dealing with challenging problems and engaging them with the help of some amazing people working in the field. I feel that it was great working here in TI and hope that this experience will be instrumental in advancing my career in the above field.

Naman Gupta (2012A3PS080P)

Internship in Texas Instruments has been phenomenal. Within a course of just 5 months, it has imparted learning in domains ranging from design to the release of chip in the market. Keeping apart the technical aspects, it has also provided exposure to the work culture of the industry. Meeting deadlines and having an open approach to suggestions from others' are necessary challenges in industry, and TI has definitely helped me overcome these. I interned in the Analog Domain with SLL team in the HVAL department. Being included in the design phase of the project was an opportunity to realize my practical knowledge and skills in designing circuits. The team was very well integrated in the sense, that all the engineers ranging from designers to validation engineers were sitting just few cubicles apart, making communication a lot easier. Knowledge about the technical aspects wasn't just restricted to weekly meetings but also explored in casual talk with mentors and teammates. The six month internship is not just a test of hard work and dedication, but also encompasses a hidden challenge on your ability to socialize with others. This crucial aspect plays an important part in the bonding with the team and overall experience of the internship.TI also offers Texins extra-curricular activities and it should be used judiciously as a stress-reliever as well as overall development. The flexible timings of work justifies TI's belief in efficiency and not binding individuals to a monotonous work schedule. All this awareness about this industry has surely been a great experience and I am thankful to the PS-WILP team for providing such an opportunity to students.

S Anusha (2012A3PS102G)

My domain of work was Analog. I was in the Audio amplifiers team and worked primarily on Class D amplifiers and its efficiency improvement. The courses which were most useful for this internship were Analog electronics, Microelectronics and Electronic devices. My project was executed mostly using Cadence simulation software as well as MATLAB. The exposure we were given to these tools back in college was of great help. Also, the courses present in the Skill gap program, especially the one on Analog devices was pretty useful. Texas Instruments is a really good place to work in. The work culture is exceptional, where an intern is given no less attention as compared to an employee. The projects we get to work on are all innovative and useful for the growth of the company. We had trainings which went on for more than a week on various tools like Shell scripting, Pearl, MATLAB etc. which are useful during the course of the project. We have constant interactions with the higher authorities, like the heads of various projects happening in TI, and learn a lot from their experience. We get to apply what our courses have taught us and expand our knowledge to greater depths. It has definitely helped me grow as an individual in every possible dimension.

Rishika Behera(2012A3PS208P)

The college curriculum for Electronics (EEE and ENI) is a motley collection of courses, some of which might not be directly related and, often it might become difficult for an engineering student to understand the relevance of each of these courses in the industry applications. After my 5 month internship at Texas Instruments, a core semiconductors firm, now, I can finally understand why each of those courses was taught. My project was on a frequency synthesizer, a system which encompasses the concepts of control systems, microelectronic circuits, counters, communication systems and most importantly basic analog electronics. Through a single project, I got a chance to apply all that I had learnt in two years of electrical and electronics engineering and hence get a better clarity. It was indeed exciting to see applications of the concepts which were once a part of our "tutorial tests" and "compres" in the making of products which are in turn used in a host of quotidian devices ranging from cellphones to cars. The terms and concepts that were just a part of lecture slides and textbooks suddenly become common parlance here. PS 2 is one of the most important parts of the BITS curriculum for it finally gives the student a chance to convert his/her knowledge to skill. Texas Instruments is an apt place to learn and grow, thanks to its open culture where "if you ask for help, you'll always get it". The team members are really supportive to the undergraduates and often try their best to bridge the skill gap. The work can be demanding and challenging at times because a lot of things done here do not come within the scope of undergraduate education. However, the same thing has a twofold benefit. The challenging nature of work not only helps one learn and understand better but also gives a sense of accomplishment and confidence upon its completion. PS 2 was a chance to vindicate myself after 3 and half years of arduous courses and projects and finally get a profound clarity about my education at BITS Pilani. Finally, PS 2 through an exposure to the corporate world gives a heads up to the students before they join actual jobs. I am really thankful to PSD and Texas Instruments for giving me this rare opportunity.

Sagiraju. Raviteja Raju(2014H123158P)

Internship in Texas Instruments has come to end which is my first industry experience. It has been a great and unforgettable journey throughout. I worked on designing LM358 Dual Op-amp and Verification of LM324 Quad Op-amp in SLL team of HVAL.I feel very glad to be a part of this team working on these projects which are the redesigns in a new process technology. I feel proud on contributing to these prestigious and challenging redesigns in a new process. In this course of time, I had gained the knowledge or exposure in how to approach a design problem and successfully completing it, starting from understanding the datasheet and specifications of the device. I could successfully verify my design on meeting the specs using the knowledge that I have gained through the work done in verification of another device. Overall, it's a great learning experience throughout at each and every stage, interacting with team members regarding any problem who are always helpful, making friends in fellow interns, team lunches, power lunch and finally the entertainment part in Texins.

Girish Kakalwar (2014H124074P)

I am grateful to Texas Instruments Incorporated and BITS Pilani, Practice School Division, for giving me an opportunity as an intern in this esteemed organization. This internship period has helped to expand horizons in terms of technical as well as interpersonal skills. Many new things, new concepts and gained a lot of practical knowledge was obtained. At the same time, it also gave opportunity to apply previous knowledge and experience to the work assigned. It was an overall enhancement of knowledge and expertise. On the technical front, On chip communication that is responsible for establishing interconnect between various IP cores on a chip. It involves the challenges in handling the multiple transactions with variety of priority, modes of data transfers, algorithm used for arbitration to increase the performance in terms of bandwidth, robustness, flexibility and latency. In case of critical transactions it is very important to ensure the correctness of communication link for both the channels ie, control and data. Apart from technical aspect, this internship opportunity has helped to interact with people, the way to approach them, to manage shared resources, to work in a team, to listen and to express one's ideas while working in a team. Everyone in the team was very helpful and approachable in clarifying the technical queries. In the nutshell, it was an opportunity that has helped to enhance technical and interpersonal skills on a corporate wave front.

Pallav Jindal (2012A8PS222P)

We are extremely grateful that we are presented with this opportunity of experiencing industry atmosphere even while in college through PS2 program. It enriches us with experiences that we cannot gain through theoretical study in college. I am sure this experience will help a lot of students in choosing the right career path for them. We don't have to wait for the 'actual job' to start to gauge our field of interest. So this opportunity to work in a fine company like TI is what I am most grateful for. Being from BITS raises the expectation the mentors and organization have from us, but of course, it can also be morale boosting if taken in the right spirit. While in TI, I used concepts from various courses like Transducers and measurement systems, Control systems and Analog Design. The best thing about working in TI was the amount of respect an intern gets. We were treated at par with our colleagues who were working full time.

We even had training to begin with where basic of Perl programming, MATLAB tool and Unix shell scripting were taught. This training helped, especially in the initial phase when you need guidance the most. The overall atmosphere of work was healthy. Apart from the work, TI had a separately dedicated sports complex to break away from the monotonous lifestyle of sitting in front of PC for hours. The flexibility in timings helped us in choosing the time to work when we could have the highest efficiency. Overall, it was a wonderful experience with nice memories to take back from. On a personal note, after this PS2 experience, I am clearer about what I want to do in life.

Abhishek Kumar Roushan(2012A8PS309P)

The work environment in Texas Instruments is totally enduring and exciting. If I could talk about the help we get here from the current employees- it is totally phenomenal in terms of technical and moral aspects both. Texas instruments is an abode of perfection for electronics engineering students, with equal balance given for apprentice's experience and learning. The projects allotted here in TI would all be near future end user related projects. It is nearly impossible that the project you are assigned doesn't create an impact in TI's technology decision in near future. This fact itself is a revelation for the ongoing college students. The projects involve a feature of independence that needless comes along with the drive to provide end results. Since being the top company in electronics arena, it is legible that the focus of the work done here at TI is primarily result and user satisfaction oriented. It inculcates a thrilling motive to work and sometimes make distant things fathomable. Here at TI, the projects have variable learning phase. Sometimes you might be involved in a design problem, sometimes debugging, and other time verification. This provides a considerable exposure to such a great semiconductor company. If we talk about experience as an intern, the communication channel with the team and mentors is quite smooth. Primarily you are associated for the results to your mentor, but the team is equally helpful. The one thing to like about TI is that there is no differentiation as such in various employees and for that matter, interns too. You have the same facility as any other person in TI; though each one is driven by his/her own responsibility to proliferate in company's favour. Although people get time to learn the concepts that would be applicable to respective projects, it is still helpful if some common topics are known to the freshly joined interns. Some of them include Cadence virtuoso, MATLAB, Digital circuit design, Analog circuit design, any Spice tool, and basic understanding of electrical circuits. The experience of Practice School II was completely enjoyable and informative. Texas Instruments has helped me understand the intricacies underwent from starting of any system to its finish. It helped me have a nice perspective of certain useful things.

Shwetal Antapurkar (2014H124077P)

This internship period has helped to expand horizons in terms of technical as well as interpersonal skills. Many new things, new concepts and gained a lot of practical knowledge was obtained. At the same time, it also gave opportunity to apply previous knowledge and experience to the work assigned. It was an overall enhancement of knowledge and expertise. On the technical front, while being a part Test and Validation team in the HVAL division, in the initial few days, it was expected to study the overall system architecture of the device to be tested by studying a few documents. At the same time, a hands-on-experience with the lab instruments and the setup was obtained. The objective was to understand the testing scenario and add a value by decreasing the testing time. This experience rendered a sufficient

exposure to the testing that takes place in semiconductor industry. Apart from technical aspect, this internship opportunity has helped to interact with people, the way to approach them, to manage shared resources, to work in a team, to listen and to express one's ideas while working in a team. Everyone in the team was very helpful and approachable in clarifying the technical queries. In the nutshell, it was an opportunity that has helped to enhance technical and interpersonal skills on a corporate wave front.

Company: Cypress Semiconductor India Pvt Ltd, Bangalore

Ankita Singh (2014H124080P)

During my internship at Cypress Semiconductors, Bangalore I learnt about embedded systems and how they communicate with different IC's. My first project was related to C language. The interfacing of microcontroller with an ultrasonic sensor is done and the code is updated. It was very interesting task as it consisted of wireless control of the sensor. My second project was about the schematics of Quadcopter project. My projects helped me to understand the theory learnt in a different perspective. The subjects we studied in the institute are more theoretical, here the same subjects are learnt with more depth and are application oriented. I also implemented SPI and I2C Communication protocols on firmware. Understood many tools from Cypress like PSoC Creator, PSoC Programmer and Bridge control panel etc. Without the academic subjects I wouldn't have done the work with ease. I studied about the things that I didn't understand and with the help of my mentor I have been able to broaden my knowledge. This internship helped me understand the core subjects and look at them with a new perspective. It also helped me understanding the work we need to do in an organization.

Hariprasad P C (2014H124076P)

During my internship at Cypress Semiconductors, Bangalore I worked with USB Applications team in data communications division. Initially I was given some time to learn the USB type-C and USB power delivery specifications, working with the development boards and a training on BLE module. Then the project topic was decided on my interest in hardware and firmware. USB type-C power bank reference design was the project in which I worked. The hardware design is depending on the specifications and the firmware flexibility which takes over most of the functions. The architecture we used was by using PSoC controller for controlling the converters and CCG3 controller for overall control and profile selection for charging and discharging. My work was to design the hardware system for the charging, discharging and other power supply circuits based on the specification. There were review meetings with seniors where the issues were discussed and changes were made. After the completion of the hardware, a portion of firmware part was also implemented. I enjoyed the internship since the task was to design from the scratch which helped in learning system design in a higher level. Also the team members were very cooperative and helpful when I faced issue in various stages of the project tasks.

Shanuj Garg (2014H123162P)

At Cypress Semiconductor, Bangalore I worked with Analog Design team in Data Communication Division (DCD). Initially the project allotted to me was to design a current reference generation at 140 nm technology node, for that I learnt various architectures of current generation circuits. After that I was told to design a Low Voltage detection and Low Dropout Regulator modules at 40 nm tech node. For the projects I learned the designs from reference books and documented work by Cypress employees. The 40 nm libraries are new in Cypress so are the device models. The models were getting updated in quick intervals so everything was unstable initially; device characteristics were changing so I learned to find the key parameters to be looked at. On changing those key parameters, according to the change made in model one can get a design stable. The Cypress flow of design was different for 40 nm tech node, it is completely based on Cadence Virtuoso 6.1 GUI so I had to take various trainings to use tools in that. Overall, PS, being my first exposure to the corporate world of designing has surely generated a lot more interest in me to pursue a career in designing of circuits. This has also exposed me to the challenges faced by companies in real-time and some methods which they employ to solve for these challenges. In terms of future career prospects, I have definitely gained a little edge as the projects I worked on helped me get a grip over my basics which would help me in the long run. The team and the mentor were very helpful they are one of the reasons of my successful PS term.

Suhas. B (2014H123167P)

During my internship at Cypress Semiconductors, Bangalore I was part of NPD-Verification team. The initial part of the internship mainly consisted of learning System Verilog, SV Assertions, and UVM verification methodology. Also I completed lot of Cypress online trainings. Later I was part of project "Verification of PERI IP using UVM methodology". During the initial phase of project, I learned the functionality of PERI, basics of AHB Lite protocol, as well as test bench architecture. I wrote sequences and test cases to verify trigger functionality, clock dividers, slave communication, arbitration of masters etc. I also wrote assertions to check various temporal relationships between signals. Wrote some functional cover groups for trigger and clock functionality needed for functional coverage analysis. I also performed coverage analysis, both code and functional coverage by running regressions. After analysing the report and discussions with designer, excluded many features of RTL that couldn't be covered. Overall, the experience as an intern in Cypress was quite amazing, it was challenging of course, but I learned a lot of things, performed various tasks, understood how VLSI industry works, and definitely I have improved upon my skills.

Company: CEERI, Pilani

Ashish Kumar (2011B5A3663P)

My project is in Advanced Electronics System titled "Design and Development of Control Algorithms and its implementation on embedded platform for pitch control". Here not only I gained technical knowledge but also I learned about the practical aspects like how the things are done in a research Institute, how the government decides which projects to fund and how CSIR decides which CEERI lab would get what project, how the transfer of technology takes place from CEERI to other government institutes like ISRO etc. Apart from learning these things I got the opportunity to meet the best minds of our country in electronics field and also I got more concrete idea about what I want to do in my future. Here I met people who have done some tremendous work in their field and got inspired by their humbleness. Regarding the technical aspect of my project, all the knowledge I required for the project like using control algorithms or learning PIC microcontroller were already covered as a part of BITS curriculum courses like control system and microprocessor and interfacing. The remaining few aspects of project like fabrication of module etc., I learned them with the help of excellent technical staff present in the lab. Apart from the above project I was fortunate enough to work on one more project in collaboration with a Project fellow. The project was titled "Design and development of infusion syringe pump and embedded control system and its application". This project was also along the same lines as was the previous one and I was able to publish a paper about this project which is accepted in International Conference on Power Electronics, Intelligent Control and Energy System*s*. The skill sets I acquired here include improved learning of control systems and embedded systems. Also, I gained a lot of hands on experience of working with other electronic components like solar panel etc. This has been an experience of a life time and has definitely prepared me for the real world problems out there.

Company: National Instruments Systems India Pvt Ltd, Bangalore

Aniket Samant. (2012A8PS354P)

The office where my PS-2 is NI India's Software R&D Centre, the work carried out there is software research for certain NI products in the form of teams ranging in size from less than 10 to more than 60 members, depending on the amount of research required and the importance of that product in terms of market share and revenue. I was allotted the Motion team, which develops software for NI's motion control products, and also carries out testing and debugging activities related to them. My project involved developing software to control Ethernet stepper drives sold by NI in its motion control portfolio – for one of the future releases. It involved trying out new features, testing corner cases, and making the necessary modifications where required for making the end product robust and bug-free. Since it is for one of the future releases, by the time PS-2 ended it is still in development stage, and used as a prototype which may be worked on later by the team before finalizing the design. The project required a good command over LabVIEW (a dataflow programming language developed by NI) and learning good programming practices in LabVIEW development. Concepts related to design patterns (not necessarily restricted to LabVIEW), object-oriented programming, a bit of embedded development, and working with various LabVIEW modules (RT module, Soft Motion module) were necessary to be learnt. Apart from that,

working with virtual machines and version control systems was also needed to be learnt. The documentation, course videos and webinars provided through NI's internal network were sufficient for ramping up to the requirements of the project. The overall experience at NI Systems has been quite good in terms of developing an interest in the field of motion control, gaining knowledge related to NI's products, teams, the philosophy behind graphical programming using a single platform, and keeping the mind open to new techniques and methods used in software development. The internship provided an exposure to a corporate environment, the norms and etiquettes followed there, and what is expected of a professional at the workplace. It was also a confidence-boosting experience since the project required learning a lot in a short period of time, and I got a lot of support from my mentor, manager and the entire team during the process. It has definitely helped in terms of both personal and professional development, and will certainly reflect well in future pursuits.

Kirti Chug(2014H103093P)

The internship experience in National Instruments Systems, Bangalore was amazing. In this five and half month's experience, I was well trained technically to work on the critical project of the company. Even though being an intern, we were given importance to work on critical project. We were given training adequately on various skills as C#, WPF, LabView and Modular Instruments. My mentors and managers trained us with required skills and technologies for the project. They were always ready to clarify my doubts and help me improve my weakness by giving me exposure to communicate with senior level employees. With the PS experience, I was exposed to the industry standards, working environment of the company, flexible working hours and also to work with highly qualified and experienced employees including the top level employees. As a part of my internship I was communicating with senior and experienced engineers and managers. As a part of the project, we were supposed to present our work after each month which helped us being motivated for work and also enhanced our presentation skills. Mentors, managers and senior employees always gave appreciations for work and also motivated and inspired us to perform more efficiently. I felt proud to be a part of ongoing and critical project of the company. I not only learned my computer science skills but also electronics stuff by attending lectures and being a part of Electronics Book Club conducted in the company. Mentor and manager always discussed and gave work according to my skills and interest. Not only I enhanced my programming skills but also got an exposure to code review process and code optimization techniques. I realized how working here is different from our institute projects. Before the code implementation only, the design is documented and verified from senior engineers and after implementation tested with certain test cases written by us which included functionality, unit and performance tests. The code was then reviewed by senior engineers and I incorporated those code review comments. The code review process helped a lot to enhance our coding skills and optimization of code. A lot of emphasis is given to make code easy to read, understand and reuse. Practice School experience has also helped us become familiar with the required attitude and the working environment of companies. The constructive feedback from seniors has helped us in developing new skills as well as refining other skills. Hence Practice school has provided us ample opportunity to implement the techniques learnt in classroom as well as learn new concepts. I sincerely believe that due to this hands-on experience we are now better prepared for the future and

experienced gained here will help in smoother transition from academic. My sincere thanks to PS Division and National Instruments for giving this opportunity to bridge the gap between industry and academics.

Lohith S (2014K112191P)

My five and half month's internship here has been a great learning experience in both technical and Communication. The technical experience I gained was mostly in .NET and HTML5. During the course of my internship I understood a design methodology of integrating HTML code into native applications. I also by research learnt that this is a good practice for cross platform development. I also understood how to localize .NET applications and its importance when you consider the many languages and cultures an application may target. The work I did made me rethink how to use the many tools we learn over the years and use it to solve problems such as cross platform development and localization and in some cases it now it feels like the solution was staring at our faces. I not only had to learn how to code but also explain it to colleagues outside our department whether it was trying to help them overcome a problem they were stuck in related to my department or explain my project to them or sometimes just general discussion. National Instruments is a diverse organization with employees from all over India, each having their own opinion on many social and technical issues. Overall I found everyone very open in this regard giving me a very interesting perspective on many issues social, technical and business. I found out many new technologies by just speaking with everyone. The Bangalore office regularly gets visits from members of other offices. The discussion with them is very interesting due to the cultural difference as well as a difference in business perspective. The visiting colleagues not only shed light on many topics in their country they also learn a lot about our culture. Overall my interaction with them has been very enlightening. My experience in National Instruments has been a great experience, giving me an amazing opportunity to learn new topics which is usually not possible in institute.

Neha Giridhar (2014H140127P)

I have been working here as a part of Embedded Vision Team. The internship has been an amazing learning opportunity for me. The main objective of my project was to do research on parallel programming on heterogeneous platform and apply the same. Hardware for the implementation of the application was provided. Major chunk of my project involved integrating OpenCL in the already existing libraries of the Vision team and creating a platform where anybody and everybody from the team can play around with the code and analyse results. For the implementation of the project, I had to learn various concepts like GPU Architecture of Quadro (GPU provided by NVidia), Intel integrated GPU, OpenCL, OpenCL C, some basic knowledge of shared libraries and memory optimizations techniques. Apart from this I also learnt various aspects of image processing. The objective behind the project being to utilize GPU and do parallel processing of the data on CPU. Highly parallelized data which takes a long time to compute on CPU and has high ratio of operation to memory transfer, can be transported to GPU and help improve the overall performance of algorithms. Comparative analysis of various image processing algorithms like blending of

images, image filters like sobel, median, Gaussian, image operations like erode dilate and convolve, etc., was done with the kernels written in OpenCL C targeted to GPU, to improve the overall performance of the algorithms. Comparative analysis included creating benchmarks, which introduced me to LabVIEW. Also, for analysis with the already existing tools in market, comparison was done with OpenCV kernels. I learnt to create integration of various platforms with OpenCL. GPU performance was analyzed by various tools present in the market. So, not only I learnt behind the scenes of introducing new features in the existing product but also how research happens in industries. I learnt that people in industry are creative in their own way. In no way, is academic project similar to the projects we have in industry. All the verification, code reviews, testing, corner case correction, makes it so much industry oriented. Practice School experience has helped us become familiar with the required professional attitude and the working environment of companies. We also got an opportunity to interact with and learn from many experts in the field. I believe that due to this hands-on experience we are now better prepared for the future and experience gained here will help in smoother transition from academics.

Subha Sankalpa Pattnaik (2014H124079P)

The five and half month internship at National Instruments, Bangalore was an immense learning experience and the first bridge towards the professional world. The tasks or project given to me brought out the problem solving skills and also taught me how to approach a problem statement. At first t was little bit difficult to cope with the ambience and to understand the task but in due course with the guidance of my mentors and practice it was all a pleasant experience. No doubt I learned a lot but before learning the right thing I had to go through many mistakes and things not to do. This in turn helped me a lot and gave me right sense of what to and how to do tasks. The ambience and the professional treatment of other employees gave me the confidence and made me feel as a significant part of the organization. And this confidence brought out the best in me to complete whatever task I was given in time. In the end it was a wholesome experience of professionalism and in future, wherever I go this experience will be the foundation of my all my successes and achievements in my professional life.

Company: Reflexis Systems (I) Pvt Ltd, Pune

Agastya (2012A3PS198H)

My PS-II at Reflexis Inc was pretty amazing, the people are very friendly and there is no strict dress code and most importantly the timings are flexible. The work also interesting, at least my work was.I had no clue what JAVA programming was, all I learned doing OOPS course was how to print 'hello world' which was quite the achievement for me back then. On the first day we took a written test, the paper had a few java questions and an essay. We were given an hour to complete it and at the end all I did was write the essay, I didn't even try to answer any JAVA related questions but thanks to my team here at the end of my PS I made an application that automates their current system of handling issues with their third party servers and they are actually going to implement it and start using my application. I learned JAVA EE, Restful web services and a little Spring MVC for the server side part and I used HTML, CSS and Angularjs for the client side programming, and yeah I also got a PPO. So if you are like me (no clue about programming) then Reflexis Inc is a good place to start.

Manoj Deshpande (2012AAPS068H)

PS experience at Reflexis Systems has been a whole new and different experience for me. This has givenme a hands on experience on Corporate culture. The work culture, challenges, colleagues and trainings that we get here, have really made me prepared for what's to come in my life. Reflexis Systems is a relatively new company which has been working in the fields of providing ITsolutions to the Retail Brands mostly. And is among the top brands in its field. Some of its products include Reflexis Workforce Scheduler, Reflexis Task Manager, K-Registry.The project that I was working on was to build automation using Gradle. In the process, I learned JAVA EE,Gradle and a little Spring MVC for the server side part and I used HTML, CSS and Angularjs for the clientside programming. According to me, Reflexis is a good place to start for a person with little or noknowledge about Computer Programming.

Pavan Kumar Boinapalli (2012C6PS554G)

My PS II at Reflexis Systems was an amazing experience overall. I much satisfied with my Internship because I have been allotted project in the area I am interested in. My project was on Analytics Reporting and I have been working on IBM enterprise analytical reporting tool COGNOS. The main advantage to me by doing internship is that I got to work in the real world environment and there are many challenges you can face only when you work in that environment, whereas project works in the college are done in restricted environment. I got to make direct contribution by working on the Reflexis products and this is challenging because of the deadlines and specific client requirements. But people at Reflexis were very kind in helping me overcome these Industry challenges. I also got to learn new technologies whose base knowledge is provided by courses done in the college. Only after gaining industry experience, I got to learn how the concepts we learned in college are applied in the real world. I got to meet new people with great knowledge, proficiency and experience in the software Industry. I got to learn how Software Development Life Cycle is implemented in the company where everyone is key part of it. Overall, PS II is a Unique and excellent experience of my college life and is very much needed to prepare me for my professional life. I am thankful to Practice school division for providing me this excellent opportunity at Reflexis Systems.

Prasanth Namana (2012A3PS149G)

My experience in PS 2 was very good. I got exposed to many things which I was unaware. I gotvery much exposure to all the things that were going in the company. I learnt many things herewhich were almost impossible to learn theoretically. Reflexis Systems is a relatively new company which has been working in the fields of providing ITsolutions to the Retail Brands mostly. And is among the top brands in it's field. Some of its productsinclude Reflexis Workforce Scheduler, Reflexis Task Manager, K-Registry.I got a chance to work on Build automation using Gradle. I got an opportunity to learn gardle,Java,Html,Javascript,angularjs.My project was to minify js files,connect to database and execute queries,create a war file for web application wrt database and server and deploy that war file.All these should be done using Gradle and integrate this with Jenkins. I am very thankful to BITS-Pilani for giving

me such an opportunity for learning things practicallywhich will help me in future whichever company I join. I would also like to thank my mentor and mycolleagues for being so much supportive and helping me throughout the journey.

Abhishek Jaimini (2012A3PS199G)

PS experience at Reflexis Systems has been a whole new and different experience for me. This has given me hands on experience on Corporate culture. The work culture, challenges, colleagues and trainings that we get here, have really made me prepared for what's to come in my life. Reflexis Systems is a relatively new company which has been working in the fields of providing IT solutions to the Retail Brands mostly. And is among the top brands in its field. Some of its products include Reflexis Workforce Scheduler, Reflexis Task Manager, K-Registry. I got a chance to work for two of the projects. One was Cognos Reports Development. Cognos is a software by IBM to generate reports. The other one was K-Registry, which is a suit being used by governments of many countries like Bermuda, Turks and t Caicos Islands. It works as a database software for these governments regarding companies and entities that work in the respective countries, containing the records about their registration, directors, listings and everything else related. It was really challenging and fun learning task for me to solve the client issues.
While working for Cognos Report Development I got to learn a lot about DBMS and Cognos. While working for K-Registry, I got to learn a lot about web development, Java, Servlets, MVC models and a whole lot of debugging. Not being from the Computer Science stream, it was a bit challenging but fun task to learn so much about all these, which now sets the right path for me to enter the IT industry. Overall, I found this internship to be stimulating and an experience to cherish. It is important to be eager to learn and be energetic. And I think Reflexis is a great place to learn and grow, and an opportunity provided by BITS.

Arun Vijayan Ck (2012A3PS199G)

PS experience here in Reflexis systems has been a great journey. This place is friendly to everyone who wants to learn. It has employees from all kinds of educational backgrounds and with degree from disciplines other than Computer Science. I think there is a transition involved when we move from college to corporate life. Reflexis Systems has made that transition for me, easy and smooth. I was lucky to get myself into the team of one of the major products of the company, Reflexis Workforce Scheduler(RWS). RWS provides optimal solution to various challenges faced by the retail industry like making and managing schedule, Leave requests, Time and Attendance etc. I was working on a dummy project to manage leave requests of employees initially, for about a month. I learned how servers worked, how the most brilliant websites are just pages residing on another computer(server). I got to learn about some relatively old technologies like JSP/Servlets which are outdated now. The rest of the PS duration was filled with work from bug fixes in the product. These bugs ranged from a small alignment issues to page crashes. This was a challenging task initially but, I gradually got the hang of it. I learnt a lot about new technologies like AngularJS, Spring framework, JQuery etc. working on these bugs.

Company: Samsung R&D Institute, Bangalore

Rahul Singh Katoch (2012A7PS005H)

There is a big misconception that Samsung is only an electronics company. However, working here, I've understood about how most of the software products and technologies we see in Samsung's huge line up is home grown. I worked in the Android Platform department and my project was related to analysis of User Mobile Data. The project required me to have a working knowledge of R scripting, shell scripting and Big data concepts. It was able to gain huge experience in the field of Data analysis and Data sciences, which is among the most exciting fields in Computer Science today. Samsung has always been a very competitive company in all areas, which has led it be a market leader in various technologies. Employees work hard and with great determination towards developing patents and implementing current technologies. My time here has helped me grow as a professional, learning from people with upwards of 15-20 years of experience. Seeing them as curious souls, keen to learn whenever possible, has definitely inspired me to work as hard as possible. I also learned how to stay calm, composed and have fun while working, something that is necessary in a workplace. During the course of the project, I had to learn awk scripting and spark. The workload given to me was reasonable and there were no unrealistic deadlines. My manager always pushed for the understanding of the concepts of Big Data while we implemented them and during analysis. Regular team outings only acted as a stress buster and a good team-spirit building exercise. The PS program has, in all honesty, given me a transition stage, where I can connect with the industry before actually joining it after college. Working as a part of a project under professionals, watching how a team functions, facing deadlines and in the end, feeling proud of the work you've done, are huge steps towards working in industries. It is a great platform to see how the theory that was taught to us is being utilized by the industry and what developments they have done in that field itself.

Aastha Agrawal (2011B3A7542G)

I am near to completing my second PS II – first one being at BlueJeans Networks and second (present one) at Samsung R&D Institute, Bangalore. Internships are first step to your industrial life and hence very crucial. Both my PS II proved to be great learning lessons. I will now present various aspect of my PS II at Samsung in the following order. I had two semesters of PS II. I wanted to gain experience in both a start-up (first semester BlueJeans Network) and a big company. I also wanted to modulate between industrial and research environment. Hence, combination of these two stations seemed to satisfy this. Apart from this I have been inclined towards Computer Networks, Internet of Things, and Ubiquitous computing from early on. While putting preference I hoped for that Samsung would enhance my learning in networks domain. (Note: Due to Samsung policies, I am not allowed to tell much about my project. I will however tell the tools and learning's through the project.) My project, as I hoped, was related to Internet of Things. I worked on mobile platforms of Android and Tizen. I got proper amount of time to learn these two technologies as I didn't have prior Android/Tizen experience. Problem statement for the project was all very advanced. However, my outcomes/deliverables didn't turn out very well because first three projects out of four were scrapped off mid-way because of patent issue, or technical limitations like platform change etc. So by the time I started with my final project it was already May. Although it was really unfortunate for me but I wish to emphasize that it is a team thing and can happen at any PS station and any technical project. Technical learning was great for me, and for other interns here. We worked on emerging fields like Internet of Things, Natural Language Processing and Data Analytics. It was a good

experience overall. I am not very satisfied with the way my projects were handled, nevertheless, it did learn a lot of technical stuff.

S Shirisha Reddy (2012AAPS035H)

The PS station is very good from research and learning perspective. The training session conducted for android app development was very helpful. The project I worked on helped me gain a lot of knowledge. The technology stack I worked on is a growing and has a good scope in future. Teammates were really helpful. All In all this is a very good PS Station for people who wants a good learning experience. My project is on iOS backup related android application. It helped to understood various critical features of apple new Operating System iOS9. I studied many features, Cloud kit Data base, iCloud Drive, authentication procedures of apple, various encryption, decryption algorithms used by apple. As there were no resources available to fetch data from iCloud, the project was really challenging. We got to work on cutting edge technologies and I learnt a lot from my teammates. This was a very helpful experience and helped me familiarize myself with IT sector and the work culture of the company.

K.V.D.S.Kalyan (2011B2A7794P)

Working at Samsung R&D Institute has been a great learning experience. The place fulfilled my expectations from an R&D centre in general – Allowing me to explore, innovate and take risks in a constructive way, helping me to learn while delivering the necessary product for the company. My work was with the Software Input Panel team of Samsung, which is responsible for enriching the keypad experience of the user. I have been assigned with exploring and designing a next word prediction system in a more contextual and intelligent manner. The project being entirely new, I had an opportunity to make the best out of it and learn how a new project is to be tackled from scratch. This involved rigorous literature survey of necessary technologies and techniques which can aid in the engine design and implementation. As part of the study, I gained knowledge about basics of NLP like Probabilistic Graphical Models and Language modelling, parameter estimation techniques, optimization techniques and many more. The problem of classification has also been explored and a comparative study of various linear and sequential classifiers, feature set combinations has been done. As part of the integration to existing keypad, in depth understanding of language models, adaptation techniques, compression, encryption was needed. The success of a team is defined by the people who make the team. I have been fortunate to get a very smart team and a manager with an infectious zest to learn and innovate. Right from day one, I have been allowed to proceed with freedom of thought and at my own pace. This, I feel, is an extremely important thing for any employee, especially a fresher who has just entered into the corporate world. All my friends who have done their PS at Samsung along with me echoed similar sentiments regarding the organization, the work and the people here. Overall, it's been a very productive PS-2 at Samsung R&D and it set a perfect tone for what I wish to do next.

Company: Smartlivez, Bangalore

Rishabh Kediyal (2011B4A3715P)

My experience a Smartlivez has been nothing but amazing. When we first joined I was really skeptical about the work and possibility of achieving whatever was expected from us. The office and the ambiance didn't look as we had expected. The number of employees at the station was lesser than the number of interns that had joined. We were five people and they were just four. We were introduced with the work right away. The fact that it was that sort of work that I had never attempted scared me. I didn't expect much help, but whatever I got was really good. I learned about a lot of things technical as well as administrative. Since it is a start-up at its very nascent stage, nearly all the activities that run an organization were visible on the surface. From managing the product development to the finances. Slowly, we were transformed from lazy students to productive team members. The workflow of things was good -> tasks were set on JIRA (a issue tracking software) where we were also expected to give updates. Then there were weekly reports that every employee/intern had to provide at the end of the week, it made me feel responsible for my work. Other than that we had weekly meeting with the team based abroad, where we had to explain our work. I realized that all the work we did went straight into the product, it made us feel valued. Majority of my work was related to position tracking using the inertial sensors, namely- Accelerometer, gyroscope and magnetometer other than this I was also required to implement the algorithms that I designed, into an IOS Application. For that I had to learn a whole lot of things like IOS App development, Git hub, little bit of firmware and of course 3-d Maths. I was also asked to make some changes in the previous version of the App. Another part of my work was working with the multi sensor data and making sense of it. This was a relatively hard problem. No one in the company knew how the task was to be done so, there was minimum help from the mentors in the company on that front. However I was able to find some blogs and research papers on the topic, which helped a lot. Looking back, I feel really grateful to PSD for allotting me this station. I got to learn a lot of stuff that i would have missed if I wasn't allotted this station. I was able to apply whatever I had learned at campus and achieve really good results. I was able to provide a pretty accurate plot for the position using the sensor data which was really appreciated by the company management. I really believe that getting hands on experience in the industry is so much more than class room learning and it really helped me become better equipped in dealing with challenges in the future.

Mihir Gagpalliwar (2014H140124P)

My experience in PS 2 was very good. I got exposed to many things which I was unaware. My company was a startup company. So I got very much exposure to all the things that were going in the company. I learnt many things here which were almost impossible to learn theoretically. I got to know how the Bluetooth technology works and how we can customize applications for Bluetooth and build applications. At first I was very scared that how will be the things be in company as I have never got any exposure to working in the company. But then our bosses were very much friendly and made us feel very comfortable. They supported us completely and guided us from time to time. Slowly I got acquainted with the things and company and felt very comfortable. My project was regarding custom sensors which were interfaced with Bluetooth for analysis purpose. It required basic knowledge about how Bluetooth works, how to interface them with IOS app and basicC- coding. Initially it was tough for me but then slowly I got

acquainted with the skills required and coped with them. My bosses played an important role in that. They helped us in all possible ways. We implemented many features in the sensor tag. We also fixed the bugs that were there in then sensor tag to make the firmware smooth. There are two types of sensors they were trying to make. One was club tag and other was sensor tag. My work was mainly on sensor tag. We also wrote manufacturing test cases about sensor tags. These will be used for mass production. We did the beta testing for the sensor tags and also released the beta version of the firmware. I am very thankful to BITS Pilani for giving me such an opportunity for learning things practically which will help me in future whichever company I join. I would also like to thank my mentor and my colleagues for being so much supportive and helping me throughout the journey.

Akhil P Oommen (2014H140122P)

When I heard that the company I am going to intern at is working on something related to Golf, I honestly started fantasizing about playing golf. Unfortunately that never happened. Instead I had to break my back working from 10 to 8 and sometimes even weekends too. Sounds pretty bad, doesn't it? Yeah, that is startup life. From another perspective, here I got a chance to develop a custom hardware and write its firmware singlehandedly. I didn't become a better coder or a hardware engineer working here (I was already awesome: P), but instead I got a chance to learn systems designing. Think of designing a Bluetooth based module that should be smaller than your fingertip and should run for a year with a battery 20 times smaller than the one in your wall clock. To make this possible, every single aspect of the design should be completely understood and necessary tradeoff should be made (I forgot who exactly it was but somebody had said engineering is all about making right tradeoffs). Another thing I liked about here is the friendly atmosphere. My co-interns were pretty awesome. Overall and technically I got a chance to be a part of a Silicon Valley Startup.

Rohit Pentapati (2011B4A3448H)

My experience at Smartlivez was enthralling. I always wanted to work in a startup especially a tech startup where I could learn through actual experience. With this zeal I chose Samrtlivez as my PS II company. Initially I was sceptic about my possible contribution to such a fast growing startup. As an intern in a company of 8 I learnt a lot. Smartlivez is developing a set of wearable gadgets for sports tracking (for golf as of then). My role as an algorithmic was to implement machine learning algorithms to precisely determine when a particular type of shot was played. I was introduced to iOS app development; I became more comfortable with linux environment for development, using GIT for version control. I also had to deal with various machine learning algorithms for gesture recognition. An overall understanding of the BLE Stack, firmware and brief hardware development was obtained. Apart from the technical aspects I got a chance to be close and observe the way a company is built from scratch. I thank BITS Pilani and Smartlivez for providing this wonderful opportunity.

Company: NVIDIA Graphics, Pune

Nikita Krishnia (2014H140126P)

My experience at NVIDIA as an intern has been really great. It proved to be a stepping stone for my career. The kind of exposure and opportunities given in NVIDIA, were truly amazing. Even though I was just an intern, my views and suggestions were always discussed and if they were good, they were also implemented. I had daily review meeting with my manager which was very important for the feedback and continuous improvement of my performance. I even had access to the weekly meetings of the whole team where my suggestions were always welcomed. All the employees were very friendly and were ever ready to help me all the possible ways. I have been working here as a part of software development (UI) team on the LIVE project. I was introduced to web technologies which are very different from my background as I came from embedded systems profile. But the kind of environment, I got here in NVIDIA is so amazing that I learned the concepts so early with the help of my mentors and other people. The mentors were really helpful and always encouraged to try new things. They guided me very well and helped me throughout my project. For the implementation of the project, I had to learn various concepts like HTML, CSS, JavaScript and some basic knowledge of programming. So hard work and proper guidance is what matters, which helps you to do your best even if that is not your field. PS2 is one of the best platforms offered by BITS for better understanding of concepts learnt in classroom and also understanding the industry. I was not just well trained technically but was also exposed to the high working standards of the company, the very flexible and optimized working condition, highly qualified and experienced employees (including top level managers) with whom I could have meals and share not just my training's issues but also my day to day happenings. I sincerely believe that due to this hands-on experience, we are now better prepared for the future and experienced gained here will help in smoother transition from academic to professional life.

Bofin Babu (2013H313085H)

I did two projects during this internship. My first project was to build a DirectX-12 FPS test application for testing games, inside our team. The second project, for which I spend most of my time, was to design and develop a unit and functional test suit for NVIDIA's game capture module. I successfully completed both projects and my overall experience during the course of this internship was good. For my first project I had to learn DirectX-12(Direct3D-12, to be precise) in order to build the test application. I didn't have enough resources to learn DirectX-12 at that time, since it was a new release of DirectX, much different from its previous versions. The official documentation was even incomplete, and there were no people in my entire floor who knew this technology. I struggled quite a lot to complete this project. Whenever I got problem, I had no one to help me, even Google! I used to go DirectX-12's official GitHub repository, find core developers of Microsoft working on DirectX-12 and ping them to resolve my issue. My manager intentionally gave me this project to make me more self-dependent and a better learner. I consider it the best (and the hardest) training I received in my entire academic life. In the second project I got more responsibility. I had to design and implement a unit and functionality test application for NVIDIA's game capture tool called ShadowPlay. It was an important project from the company's perspective and I was happy that I got the responsibility to design and build it my own. I even had the choice of programming in any language. I built the program's backend in C++ (about 3000+ lines of code) and the interface in Python (about 2500+ lines of code) myself. I also had to learn a lot before getting into this project, especially some of NVIDIA's proprietary modules. But the learning was not as hard, compared to previous project because I've had proper documentation (internal to NVIDIA) and the help of team members working in the related

technologies. This project was also a great success and I've managed to complete this in time. Overall this internship was a great learning experience. Being the only intern in my team, I had never been expected to work like an intern. People expected me know things the way they knew. I've never made any excuse, instead pushed myself harder and became in the same pace with them. I've also leaned important lessons of team work and made a few good friends during this internship.

Siddhant Prakash Pardeshi(2012A3PS200G)

AngularJS is a powerful structural open-source framework developed by Google, that can be used to build dynamic Single-Page Applications (SPA). My project focused on deploying AngularJS in an Nvidia Software Project, to build a robust, reliable and responsive web application. Robustness and Reliability are expected to be key features of software that has a global user-base, thus requiring diligent development. Responsiveness is another required attribute of the User Interface (UI) of such software, to create an engaging User Experience (UX).The skill sets that were required included basic knowledge of HTML and CSS, along with JavaScript, jQuery and AngularJS. I acquired these skill sets by pursuing online courses at Codecademy, Codeschool and Udemy.PS-II has been an excellent experience not only in terms of the knowledge and industry experience gained by me but also in terms of the job opportunity with Nvidia that it resulted in. I am thankful to my mentors, managers, my PS-II faculty and the entire Practice School Division at BITS Pilani.

Aditya S. Rairkar (2011B5AA518H)

PS2 at Nvidia Graphics, Pune is a good learning and working experience. Mentors and team members are very helpful and friendly. My project area is software, mainly C++. I am assigned to work on Coverity. It is a software analysis tool. We basically used Coverity for analyzing Nvidia's Graphics drivers. This tool helps to improve efficiency and security of a program. Throughout the PS2 program, I worked on around 100+ Coverity tasks. Along with, I also learned about basic concepts of 3D graphics programming. I also learn languages like HTML, Javascript. Apart from the project work, we also used to enjoy the free time at Nvidia by playing Table tennis, foosball, etc. For working on the project, I needed to know basics of programming i.e. C, C++. I could achieve the skills required, with the help of my mentors and using online books. So overall, internship at Nvidia was an amazing experience.

Company: Analog Devices, Bangalore

Anmol Dhanuka (2012A8PS304G)

This was my first technical internship and I have learnt a lot in the past five and a half months. The main reason for the learning was a great work environment in the organization. All the seniors in the company

were very helpful and willing to introduce new technologies to the interns to increase the length and breadth of our knowledge. My project included verifying the signal and power integrity of Double Data Rate (DDR) RAM interface in the organization's upcoming DSP chip. From the very first day, my mentor, Mr. Wreeju Bhaumik informed me how crucial my work is as it will proceed in parallel with the rest of the Mixed Signal team's work. Even though it was a huge responsibility, my mentor believed I could do the work efficiently. He guided me through the various topics required for accomplishing the work. The work was based on Electromagnetic Wave Theory. As this topic was new to me, I started reading a book. Further, I was assigned work for verification on a software called Advanced Design Systems (ADS) by Keysight. ADS is a RF frequency Electronic Design Automation (EDA) tool which has much significance in Signal and Power Integrity verification. First, I had to understand the working of the software and its features. Once I understood the working, I was given the datasheets of the chip to check for its signal and power integrity. Evaluating the signal and power integrity is an important part in designing the chip especially in such high speed interfaces like DDR. The bitrates in these interfaces goes up to 1600 to 2400 Mbps. At such frequencies, the transmission lines in the PCB chip start showing certain cross talk, ringing and ground bounce effects. This can lead to unreliable transmission at the other end of the interface, which can cause failure of the system. Hence, signal and power integrity needs to be verified for the system to evaluate and then minimize these effects. Apart from ADS, I also worked on an AC analysis on HSpice and further analyse individual traces on Hyperlynx by Mentor Graphics. I learnt a lot of technical skillsets required in chip design procedure. This will be beneficial to me in the industry and higher studies. I was quite interested in the work assigned to me and now am clear that I want to pursue my career in Electronic circuit design field only. Hence, this internship helped me identify my goals for the future. Along with technical skills, I also learnt some valuable personal skills like the importance of time as I had to complete my projects within deadline. Also I was supposed to present my work to the team, thus enhancing my communication skills in such formal environments. These all professional and technical skills will help me during my career in industry in future.

Apurva Jain (2011B3A3607H)

During my PS2 internship at Analog Devices, Bangalore, I worked on a project where ARM- Cortex M4 processor is being replaced with Programmable ARC processors for MEMS chips. To complete this, I learnt about processor designing using ARChitect2 tool. This part of design required knowledge of several subjects such as Computer Architecture, Microprocessor, Signal Processing and Digital design. Testing this customized design of processor required knowledge of HDL Programming also. For simulation purpose, Synopsys's VCS tool was used whereas for synthesis and implementation Xilinx's Vivado design tool was used. Similar tools were used in the institute which made ramp up easy for me. The environment of the organization was very pleasing and employees were very helpful. The interns worked on live projects which made us aware how working in industry is different from academic projects. Learning wise it was an amazing experience as I learnt about various tools required for FPGA prototyping in industry. I could correlate the theory in institute to the live work going on here. The theoretical concepts helped me a lot to understand bigger complex designs. Overall it was a great experience and I thank BITS-Pilani for giving me this opportunity

Debapriya Maiti (2012A8PS290G)

My overall experience at my PS-2 station Analog Devices Inc., Bangalore (ADI) has been fantastic, enriched with learning and fun. I was part of the Processor Applications Team (IPDC-APPS) for five and half months. During this time, I have gained knowledge and experience of working on ARM based Embedded Processors and their Applications, and learned about the finer details of the execution of these processors. I also got the chance to experience first-hand the development and verification/validation phases for a new product, yet to be released in market. I learned to work on various development platforms for Embedded System Design for Application Development purposes. I gained knowledge of developing a Boot Kernel for an ARM Cortex based low power microcontroller from scratch and developing the validation plan for the kernel on the RTL image of the microcontroller, loaded onto a FPGA. From first day, I was working in the main team and given work related to validation of serial communication protocols on their already developed processor ADuCM302x, in form of weekly milestones and challenges. As I progressed with the work, the quantity and quality of the work given escalated progressively, leading to my development and learning as part of their team. This also brought me in line with the team's working methodology, along with the latest technologies used in the process, and allowed me to fit in with them easily. My integration into the team was made extremely smooth by the amiable and helpful nature of my manager and my mentors. Based on my progress, I was shifted to a company priority project, involving the design of the Boot Kernel and its utility tools for their new Low-Power ARM based processor, which further gave me a chance to delve deeper into the nitty gritty of the involved processor. Analog Devices has helped me gain technical exposure to Embedded System Design, from the perspective of the semiconductor industry. Alongside furthering my technical skills, the team culture and work environment has given me a taste of the professional work culture in industry, different from academia. ADI has one of the best work cultures in the semiconductor industry, with jovial and helpful employees. The flexible working hours provided us the freedom to enjoy our work and leisurely pace ourselves towards the completion of our projects. My contribution to the team projects was well appreciated from all hierarchies of the team, and was deemed significant and important to the cause of the company, leading to fast tracking the development of the processor and aiding the other teams involved in the process. Overall, Practice School 2 was an enlightening experience, where I became familiar with the correct work attitude and gave me many opportunities to implement the concepts learned at classroom level, in real scenarios. I strongly recommend ADI to all students who want to experience working in the semiconductor industry in an amiable environment.

Desai Pratikkumar Bhemjibhai (2014H140036G)

I have been associated here as a part of Embedded Systems team. This team works on embedded vision sensing applications. During my five and a half months internship at Analog Devices, I worked on ADI's Blackfin Low Power Imaging platform (BLIP) on which I have ported H.264 BP/MP Encoder software module. BLIP has BF-707 processor provided by Analog Devices. I have completed two projects: H.264 encoder File I/O project – In this project, the input video file in H.264 format is encoded and the encoded file is saved at the target location. Input video has YUV color format and YUV420 or YUV422 color standard. Input video frame size is either 640*480 or 320*240.H.264 encoder Real Time project – Here, real time

video in H.264 format is encoded and encoded data is stored in to SDCard. The *extract_encoded_data.exe* application is used to extract encoded from SDCard. The executable application consists of Python script which reads the SDCard data and store that data in out.h264 output file. By using VLC player user can play out.h264 file. Cross Core Embedded Studio (CCES) tool by Analog Devices is required to complete this project. Embedded systems, Python script and C programming knowledge are also required for this project. Analog Devices is known as a place where innovation thrives and breakthroughs happen. There is lot of scope to learn from this organization both in terms of technical and professional skills. Employers are very co-operative and friendly. My mentor always cleared my doubts by providing the right amount of information so that I can further explore and discover solutions. The Practice School experience helped me to improve my soft skills and technical knowledge about embedded systems. It also helped me to become familiar with the working environment of companies and create a good network of colleagues that have guided me throughout my internship. I sincerely believe that due to this hands-on experience I am now better prepared for career opportunities and experience gained here will help me lot in future. This PS opportunity made me aware of the current industry standard and technologies. I would like to conclude by saying that working at Analog Devices has been an amazing opportunity for me and has definitely made me a better engineer

Neeraja Thiyagarajan (2012A8PS354G)

My PS-2 experience at Analog Devices, Bangalore has been very enriching. Along with gaining a deeper insight and understanding of the concepts in Microelectronic circuits, ADVD and Analog electronics, I have also learnt the application of these concepts. During my internship, I implemented circuits on Cadence by reading papers on MOS implementation of circuits. Analysing the MOS implementation, how it achieves the expected functionality and figuring out the possible causes of deviations in results broadened my horizons. My project was in the Analog domain consisting of design of feedback network for ADC and the analysis of Input Output Block of ADC. The purpose was to build a test bench to check if the I/O Block could function according to the requirements. The test bench was built on Cadence and the analysis and computation of delays was done on the internal circuit simulator of the organization. I analysed the circuits in terms of their delays, rise time, fall time, power dissipation and hysteresis. To ramp up I was given assignments to learn how to use the in-house circuit simulator and the analysis software. Besides this, to understand the circuits I have read up a lot of published papers and text books. My Mentor helped me a lot by solving my doubts patiently. He also suggested books to understand the working of circuits. The best part is I was given assignments to ramp up, solving which helped a lot for my project. I could figure out why a particular component is used in the design by finding the answers to the assignment questions. Nothing was spoon fed and I was encouraged to find answers on my own which made me curious and motivated. Overall, I learnt a lot and improved my technical as well as professional skills during my PS-2 internship.

Ritika (2012A3PS147P)

During my internship at Analog Devices Inc., Bangalore I had one of the best learning experiences. I was in the Design Verification Methodology Team (DVMT). My project was based on the verification of protocol interfaces used in the field of data converters. This provided me with hands-on experience in the fields of electronics in industry. Working on a live project, I realized how working in an industry is different from an academic project. I learnt about the latest technologies and protocols being used in the field of data converters, got to work with a lot of new verification tools and software. Also, I got the opportunity to work on the protocol design not yet out in the market. Working on this project strengthened my knowledge of Digital Design and improved my Coding skills. I gained a lot of technical skills in these last five and half months. I learnt Verilog, System Verilog, PERL and became accustomed to working on Linux Operating System. Apart from coding and working with different tools, I also had to document my week's work for my manager to review. I had to weekly present my understanding of the protocol specifications on which I worked to the entire team. Through the discussions during my presentations, my team and Manager would make sure that I was headed in the right direction in my understanding of the protocol and my project. Analog Devices has not just helped me gain technical skills and knowledge but has really helped me grow as a person. This company has one of the best work cultures. My manager and my mentor really helped me throughout this project. My manager would review my work every now and then and make sure I was given the task that would really test my skills and knowledge. Every new task I was given would be more challenging than the previous only because he wanted me to learn more in this short duration of time. My mentor was also very friendly and always ready to help me in every possible way. The flexible working hours provided us the freedom to enjoy our work. My contribution towards the team project was significant and appreciated by all my team employees and manager which made me feel a really important part of the team. Practice School experience has also helped develop my professional skills as I learnt the correct code of conduct in an official environment. I also got an opportunity to interact with and learn from many experts working in this industry. I strongly recommend this Practice School Station to all Electronics students because while working here you are still independent and important. This experience has provided me with ample opportunities to implement the techniques learnt in classroom as well as learn new concepts.

Saranya Das (2011B1A3818P)

Owing to my interest in analog design, I took up this station. I got the opportunity to work in the domain of Analog and Mixed Signal design and verification. The aim of my project was to validate the ADI proprietary Analog Mixed Signal behavioral models. Verification of approximately 50 ADI propriety models was done successfully. Exhaustive test benches were created for each model in Cadence Virtuoso. These were simulated in the ADI simulator environment. The net-list generated from each simulation was used to create real number model and this was further evaluated in System Verilog simulator. The mismatches in the two outputs were reported and fixed. The basics, which are taught in courses like Analog Electronics, Digital Design, Analog Design and VLSI Design and Microelectronic Circuits at BITS, helped me while working and finally attaining the goal of the project. Having worked with tools like Cadence, Virtuoso, HSpice in college, I was able to familiarize myself with the ADI proprietary tools very quickly and use them

efficiently. Moreover, my prior exposure to Cadence came very handy as most designers in core companies use this platform. I learnt Perl here as my work required some knowledge of scripting in a programming language. This was not something I was familiar with but I grasped some knowledge of it through tutorials and my mentor's help within a week. Overall, I have had a very positive experience of working in a core company like ADI. The people here are very nice and always helping. The frequent team meetings coupled with certain team outings made it a highly enriching and memorable experience. More importantly, I was happy to have been able to apply my knowledge gained in BITS in the work allotted to me through the duration of this internship. I have learnt a lot professionally from the people around me and have expanded my knowledge base as well. I am really grateful to PSD, BITS-Pilani for this opportunity.

Shailaja Akella (2011B4A3581G)

During my internship, at Analog Devices, Bangalore I learnt a lot of new concepts. My first project was mainly on Kalman Filtering. The project was to use Kalman filters to reduce the third order noise in the output of a sensor. I spent almost 2 months trying to understand the working and implementing smaller models. After understanding Kalman Filters, I spent a few days understanding how Gyroscopes work following which I started work on my project. With the help of guidance from my mentors, I could finish the project on time. In the second semester, I was assigned work related to embedded systems. The objective of the project was to reduce the dependency on testers for testing ICs. The testers cost 200$ per hour per device. For this, I had to understand their currently functional program during which I got an insight into the industrial practices followed while writing a program. This also helped in writing my share of the program in a more organized pattern. I was fortunate enough to get hands on experience using the experimental setup the company uses to test the functioning of their devices. During the course of both my projects, I used a lot of tools including MATLAB, IAR Embedded Workbench and LabVIEW. Attending PS-2 at Analog Devices made me realize that even though we know the theory from institute, it's different from implementing it in practical. However, I feel that the basics we learn in institute are very much required to perform hands-on in industry in fast and efficient manner. In this training period of five and half months, I learnt the importance of coding. Even if it is a core company, C language is used extensively in most applications. Internship at Analog Devices provided me with an opportunity to gain industrial experience. This experience would definitely help me in my future career endeavors. I have gained a lot of experience not only on the work but also on professional conduct. I am grateful to PS-2 division for providing such an opportunity.

Company: Toshniwal Industries Pvt Ltd, Ajmer

Madhusudhan Reddy (2012A3PS091G)

Toshniwal industries manufacture pressure transmitters, level transmitters, and temperature related instruments. My project is "Assembling and Testing of Pressure Transmitter". In this project knowledge is needed in instrumentation. I learned about the different instruments to measure pressure. Learned about different principles of pressure transmitter and limitations of each principle. I learned about pressure

transmitter and its uses. Learned about the different components and the materials used to make pressure transmitter. I researched about the top brands in the market and made a comparison sheet with the TIPL pressure transmitter and pointed out the limitations of our product. I made catalog for pressure transmitter. I made changes to the operating manual of pressure transmitter. I learned about the materials that are used to make pressure transmitter depending on applications. The organization does not have an engineer specialized in pressure transmitter. We did not have proper guidance. They do not have proper documents for pressure transmitter to study. We need to search in net for any information on pressure transmitter. I can only refer to the documents of the top brands to study about pressure transmitter and its applications in various industries. I learned about pressure transmitter and how they are made, their specifications. I learned how to compare our products with other companies and reduce our limitations so that we can improve our product.

K V Mithun (2012A3PS190G)

Toshniwal Industries Pvt. Ltd.(TIPL) is a manufacturer of industrial process measurement & control instruments since 1959. My project was to setup a new product line and marketing strategy for Level Transmitters (Process Control Instruments). After researching on current top brands who are manufacturing level transmitters and for what applications in process industries they are supplying their products, coordinating with overseas technology partners I made a detailed plan for setting up manufacturing and testing facilities here at Ajmer. Then, found the suppliers of different components of level transmitters with specifications that are needed in the Indian market for assembly. Later, I researched on test procedures that are needed to be conducted and equipment needed for the same and test certificates needed by different types of industries. In the end, I made the required application notes, product catalog, operating manual and test certificate needed for selling and marketing our new product. The skill sets that were required in implementing the project were basic excel, word, pdf editing, how 4...20mA standard current output signals are generated in process industries, how different instruments are connected through PLC's to SCADA, how transmitters work and its components, how RF signals are generated, how dielectric constant effects the level measurement, how signal strength varies, how to calculate gains of different antennas, basic knowledge on different processes in cement plants, how price quotations are made and negotiated, difference between Profibus PA, Modbus, HART outputs, Free space path losses calculations, calculation of power transmitted and power received through antennas.

Domain- CSIS Engineering
Company: Aditya Birla Group IT, Mumbai

Shreya Mishra (2014K149265P)

The skill set that I learned was about the important aspects of Communication with the senior most people in the Organization, about strategizing regarding the launch of such a massive Project. I also gained technical knowledge about Advanced Excel, macros and Pivot so as to perform analysis on the data received. I performed a tool analysis of all the available tools in the market. SurveyGizmo was ranked #1 and hence I chose that as the tool I would use for my Project. The tool was more advanced and user friendly as compared to the tool used last year, which got me the feedback from a Vice President that the

Survey took only 6mins to finish on mobile. The Survey was made shorter and lots of questions were dropped, taking into account suggestion from CIOs and SPOCs about reducing the length of the Survey, because of which the completion rate was about 70%, meaning 70% of the entire population who took the survey completed it by answering every single question in the Survey, which is the highest rate achieved so far in the history of IT-CSAT. I worked with the Corporate Communications to get the Questionnaire re-designed to make it more user friendly and easier to comprehend. I came up with a new idea of customized promotions for Businesses so I asked CIOs for a photo of them and a quote by them about why IT-CSAT was important for them and their Business and why should their employees take the Survey. Earlier the idea was to do the same activity with all our Portfolio Leaders, but I learnt to crowd-source the idea and went to ask PLs about it. The AVP of the Company asked me to instead have the activity centered around the CIOs as that would have a greater influence. With the help of the Corporate Communications team, Banners/mailer were designed by me made from scratch with new content and new designs The one great thing about the organization is that it has people at senior most positions who recognize the merit of newcomers so accurately that he/she is entrusted with such great responsibilities inspite of being a newcomer. The exposure and the kind of work a newcomer gets to do here knows no bounds. From writing emails to the CIOs, preparing reports for them, pushing promotions with the SPOCs at the units levels, holding webinars (I hosted two of them to give the SPOCs a walk-through of the IT-CSAT process.). Last year a lot of the coordination work was done by another senior who was mentoring an intern in my position, but this year since my senior was on leave the entire one week before the Survey launch, I coordinated with every single SPOC on the phone and even the ones abroad regarding the promotional activities, translation work, all the pre survey activities. This year the survey was on for about two weeks as compared to last year's 4 weeks (27days) and yet the overall response rate was overwhelming. And, as promised to the Group CIO, I broke all the records of the participation count of the years until now and carried out the entire analysis of the post- survey in 50% less time than last year.

Company: Adobe Systems, Bangalore

Shreyansh Gandhi (2012A7PS070P)
The experience of Practice School 2 at Adobe has been great and fulfilling. The time spent at Practice School plays a significant role in preparing one for the industry and normalizes one's expectations. It also serves as a teaching experience in matters of professional relationships and teamwork. Practice School projects are essential as they push students to learn new technologies, expand their skillset and get better acquainted with industry standards and guidelines. Practice School 2, being a 5-month long program, provides opportunities for completing several projects and make a mark on the product, unlike most summer internships. Since PS-2 is taken up in the final year of our college education, the projects undertaken much more relevant and in sync with our disciplines as compared to PS-1 projects. The work done in this period can be added as valuable work experience on our CVs. The industry experience makes one realize the gaps and similarities between theory and practice. While the courses taught on campus give us enough Computer Science concepts, but not much regarding implementation. Also, the academic knowledge does not prepare students to work on large codebases. I was part of a product team mainly responsible for the development of Adobe ColdFusion, a web & mobile app rapid development platform. ColdFusion is an enterprise server product which provides many abstractions and features to speed up the development of applications. Over the course of 5 months, I got to work on a few products owned by the team. My work included upgrading existing features, making performance & UI enhancements, and

fixing critical bugs. Working in a development team, one should not hesitate to ask for help as there is a lot of emphasis on meeting deadlines. This also hones your ability to work with others in a professional environment. As for the skillset required to work on such projects, one should be proficient in Object Oriented Programming and networking concepts. Overall, I was very pleased with my time at Adobe because of its great work culture and the very competent group of people I got to work with. It is also good opportunity for those looking for full-time offers. I highly recommend Adobe to people for the amazing time and experience.

Stuti R. Rastogi (2011A7PS094G)

Working at Adobe Systems, Bangalore has been an extremely enriching experience. I am working as a product development intern in the Adobe ColdFusion team. The team has launched a new release in February 2016, with which they shipped their very first edition of API Manager. My project focused on building a new feature, namely portal customization, for the September update of API Manager. This being a huge feature, to be worked on from scratch, there was immense work that needed to be done. Right from researching the available API Managers and their solutions, to creating the requirements and specifications for this feature to finally starting development on a few components and testing them – I got to experience the entire timeline of how a feature is developed in any tech giant. Talking about skill set, I never thought I could learn so much so quickly in so less time – template engines, content management systems, building and using REST APIs, Angular JS, writing servlets, security filters, persistence layer interaction and implementing session management layer. Adobe being a MNC, I got to experience the way these leading tech companies work. I was treated as a full time employee, being made feature owner of a high priority requirement. As a result, work load was huge and it was hectic trying to match up to expectations of the management. However, this is what pushed me to learn more and give my best. As the feature requirements were being built, the developers involved in this project had frequent meetings with the product manager and engineering managers. I was directly involved in the brainstorming sessions, which helped me understand the way companies respond to customer requirements and decide on any new feature. I was also responsible for writing the spec document for the internal wiki, as well as from time to time I submitted various kind of requirements documents and matrices. Learning to draft such clear and comprehensive documents is a valuable skill that will help me in the tech industry even in the future. As such, working these 5.5 months at Adobe, has imbibed in me various technical skills as well as soft skills. How to work in collaboration with a developer team, how to understand the expectation of management, how to learn various skills and understand existing code on my own and most importantly how to write production level code that can be shipped once tested – these are just few of the takeaways from this internship. The experience of working at a technological innovative leader like Adobe, will always be a helpful one for my career in the IT industry.

Company: Adobe Systems, Noida

Harsh Kumar (2012A7PS065P)

The five months of my PS-II at Adobe Systems, Noida has been a terrific learning journey for me. I worked here as a part of the Adobe InDesign team. My job here was to ensure backward compatibility in InDesign so that any of the file made in the new version of the software can open in the older versions of the software. I tried to develop a general way of ensuring this under the guidance of my mentor Pushp Parag

Agarwal. My work here taught me the use of design patterns as well as other important concepts of object oriented programming. I was introduced to the wonderful codebase of InDesign and here I realized how working in the software industry is very different from what we are taught as college course work or our college projects. One of the most important skill that I acquired here was the skill of debugging which is very important in any of the software industry. The programs are subjected to large number of tests so as to make them as bug-proof as possible. Also, in such codebase where all files are so much related, change in one of them can easily damage other parts of the software one has to be very careful while writing the codes. Since my work involved how the process of file opening takes place so I had to be all the more watchful while changing any of the codes. Moreover, even while writing a program, a lot of emphasis is laid on the fact that others can understand the code if any further changes are required. The environment at Adobe Systems is very friendly and all the people are very supportive. Here I got an opportunity to interact with and learn from many experts who already have a lot of experience of working in the industry. Here many seemingly unresolved questions were solved with the help of these mentors. I learned to focus on my problems by solving the problem at hand one step at a time in a swift but organized way. This gave me the confidence that in the future will empower me to tackle any problem at hand. Overall, I enjoyed Adobe as a PS station, the facilities here are very good. Every individual enjoys flexible timings too. Also there are a lot of team organized to increase bonding between the team members.

Saumya Y Sahai (2011B5A7581P)

Practice School II marked my very first foray into real industry environment. I worked with the InDesign team at Adobe under the able guidance of Mr. Gaurav Bhargava and Ms. Shailja Gupta. My project was titled "Intelligent Merge of Reimported Text in Adobe InDesign". Briefly put, I worked on implementing a system that preserved the design changes of an InDesign file whenever an updated version of the same file was reimported from a text file by incorporating only the points of change. I started off from plain text with multi language support and extended the functionality to include footnotes and tables. I implemented the regular two-way difference and merge generating algorithm and designed the three-way algorithm that worked with two-way modules in a bottom up fashion. On the way, I added many sub-features that helped save formatting/design information on text. This entire module was interfaced with the front-end. The work environment at Adobe was extremely enriching. When I compare myself from the first to the last week, I see astronomical change in how I perceive a problem and how I attempt its solution. I owe this to the clear definition of my problem statement and the excellent mentorship I received here. The fact that I am new to the industry was well respected and I was handed an open ended problem that could have been as simple or as convoluted as I wanted it to be. This relieved me from any burden of expectation but at the same time challenged me to give it my best shot, and this worked wonderfully for me on the learning front. Previously, I hardly had any experience in C++ programming environment and the first glance at the entire code base of InDesign overwhelmed me. This feeling eventually eased out when I developed what I like to call 'programmer's instinct', which helped me rummage through the current codebase efficiently, find relevant existing functions and create functions of my own from the scratch. I was supported throughout this quest; my mentor even sat next to me and helped me find and modify code when I had just started writing my program (the stereotype I had that people working in industry are rude and unhelpful to new entrants went to shreds)! The key here was to have a basic understanding of OOP paradigm, data structures and most importantly, tenacity. Everything else can be worked out gradually. I met and interacted with a lot of new people here too. This entire

experience was rewarding at personal, social and intellectual levels. I am very grateful to Practice School Division and Adobe for this opportunity.

Vasundhara Bhargava (2012A7PS487G)

I got an opportunity to work on one of Adobe's most widely used products – Adobe Illustrator. The domain of my work was optimization and enhancing two important features in Illustrator. The company has a very open and friendly atmosphere, hence all inputs are valued, whether it be from the managers or the interns. The quantum of learning at Adobe has been immense. I learnt about the application of classroom concepts at an industry level and the use of new technologies. The code conventions followed in the industry are different; readability and efficiency of the code are as important as the functionality it achieves. The interactions with the various connoisseurs were vital in developing my vision. These 5 months of internship, under the guidance of my mentor, enhanced my thinking skills and problem solving strategies. This process of handling real life problems has imparted the confidence in me to solve similar problems in future. The feedback from my mentor and manager led to a continuous improvement of my performance. Moreover, this internship has taught me team work and office-work ethics. Overall, it has been an enriching experience, to be able to elevate my technical skills at one of the pioneers of IT industry; as well as in terms of personality development. The fact that I have been able to contribute to Adobe's code base is an accomplishment from PS2.

Company: Akira Consultancy Pvt Ltd

Edarapalli V R Nikhil (2011B1A1673G)

PS-II provided me an opportunity to put my theoretical knowledge into practice. It gave an industrial exposure and an experience of the real world scenario suitable for my technical background. After having spent a duration of five and a half months at my PS - II station, Akira Consultancy Pvt. Ltd. I can positively say that I have gained a lot of confidence and expertise to face the challenges in the industrial world. At Akira, my project is on Data warehousing and analytics. We gather data regarding the sales from our clients' servers, process the data, cleanse it, and feed it into our databases which were designed based on requirements, this is done using software like SQL, Management studio etc., Data in those databases won't be able to express much unless reports are constructed. Only then data can be visualized by the individual. Once the report are build, using Qlikview, clients are given access to them, so that they can take executive decisions based on their sales performances.   I learnt some cutting edge technologies as a part of this project which will definitely help me in my future prospects. Apart from my core discipline knowledge, I gained knowledge regarding few software like SQL, Qlikview etc, which are used even in Chemical engineering (experimental data) and Biological Sciences (genetics) in handling huge data. Not just the theoretical knowledge, but a hands-on experience.   Apart from the project PS-II also gives us industrial exposure. I learnt how coding standards are in an industrial environment. Modulation of the code is of utmost importance. This is because a major concern of the institutions is scalability of the code. The code should remain usable even after a particular person is off the project. It should be understandable to everyone. Thus, variable names, packages, documentation etc. need to follow certain

rules as specified by the company.   In an industrial environment, professional conduct is also of a lot of importance. PS-II gave me an exposure to this area as well. Addressing your colleagues and documenting all conversations via emails is very important in a work environment.   It is my first experience in an industrial environment and this program has helped me to smoothly build my way from an all-academic environment to an industrial environment. Five and a half months is ample time for this transition. PS - II expanded my knowledge domain and built up my confidence to lead myself in this competitive industry. During my internship at Akira, my design of the reports that were built, were appreciated and approved. It was a minor achievement, where my efforts in the fields of art, data analysis and coding were appreciated.

Jayanta Bhowmick (2012A1PS377P)

The overall experience al Akira Consulting Pvt. Ltd. was exceptional. PS at Akira was an amazing learning experience for me. I was given opportunities to work on ETL data transaction using specialized tools like Microsoft BI Tools as well as generic programming languages like Python. In the project, we are working on extracting plans data from various operator websites by crawling their websites, cleaning the data and classifying the data into suitable classes based on requirements. We also worked on developing solutions for integration of Customer Master Data between AX, MDS and Centerstone database systems. This project had mainly three tasks namely reviewing primary and shipto AX to MDS integration, to complete MDS to Centerstone integration and to build MDS to Centerstone integration for dropship (SRAD) file. The major skills required were knowledge of SQL, ETL and Python programming language. I had previously programmed in Python so I already had that knowledge while we were given training by the company for SQL and ETL Tools.   During my PS I was able to improve my coding skills as well as learn about database systems. I also gained the knowledge of the how industry grade codes are written and deployed. The overall experience was great and I enjoyed most of the work here as well as interacting with the employees of the company. The projects were very interesting and any questions that I had were cleared instantly.

Charu Jain (2011B3A1363G)

The major learning that I acquired in my 5 and half months of exposure at Akira Consultancy, is bilateral. The first aspect was acquiring the technical skills and the second was of character building. The technical skills learned were mainly SQL which is a special purpose programming language designed for managing data held in a RDBMS (relational database management system) and Python which is an object oriented programming language. Apart from this, the enthusiasm and hard-working attributes I saw in my mentors and his colleagues have left a great impact on me and will help me in my career. The immediate exposure to real life problems in the industry along with responsibility attached with the work that I conducted has left me with a sense of professionalism and taught me office-work ethics. Meeting strict deadlines with a gradual improvement in one's methods is what I have learnt here. The tasks I have worked on were wide ranging. From finding market related data and customer and competitors' data to understanding the process of usability testing and aiding my mentor with data validation tasks, I have covered many elements involved in the building of an app. In my time here, I learned how to work alongside other people and learned the true meaning of teamwork and how important colleagues are in an office space. The way my mentor listened to my doubts and provided me with the right amount of help, not too much but just enough to set me in a path of self discovering the solution has given me a sense of responsibility. I would

like to round by saying that working at Akira has left me determined to pursue my future goals. This has been an experience of a life time and has definitely made me a better professional and a better person. My major accomplishments include not any medal or certificate but the trust and confidence that my mentor showed in me while doing the work load. My ability to solve the problems in the way advised and also in the time allotted is definitely an accomplishment for me.

M.Sneha Latha (2010B1A1652H)

Akira consultancy private limited deals with business intelligence, advanced analytics and enterprise mobility. Pursuing my PS-II at Akira is a major learning experience and it has enhanced my technical knowledge as well. It helped me to know the work culture in startups. As it is a startup I got an opportunity to work on different fields at the same time. The initial training session has expanded our knowledge base and I have developed interest in coding. My project is on marketing research and webscraping. The webscraping is done using python language. I am from a non IT background and haven't learnt python before. The various online tutorial platforms helped me in learning the language. I got an opportunity to learn various programming languages like sql, python and implementing them. I am know confident on web scraping a closely related technique to web crawling and is universal technique adopted by most search engines. Industrial exposure made me explore various career paths and got me acquainted with my interests. It was an opportunity to practically apply things that I have learnt till now. It has changed my thought process from a student to an employee perspective. The PsII experience gave me an opportunity to assess my talent and strength. Based on the assessment I was able to improve myself so as to reach my future goals.

Company: Amazon Development Center, Bangalore

Rishabh Sinha (2011B3A7308G)

This past semester at Amazon Development Centre has been one semester in BITS where I have actually learnt to apply my knowledge on such a large scale and affect lives of millions of people even though in a negligible and almost invisible manner. The Motto at Amazon.in traffic team is to work and have fun, and that is exactly how I would describe my past semester. There were days when I had to work late into the night to remove small bugs from the code which just refused to come to attention, to ensure that the project was delivered on the required date, while there were others when me along with my team left office early at 2:00pm to do fun activities such as Go-Karting, and play laser tag. The Semester was one full of learning and change. The Semester started with me joining the jungle team, however because of lack of projects, I was moved to the Amazon.in Traffic team which tries to get as much as possible traffic to amazon through various projects it implements. I was given 2 projects based on SEO which is search engine optimization which is done to ensure that your website performs as well as possible on search engines so that it gets the highest possible ranking.   Along with these I was also given a third project as the need arose to carry out cleaning of data through an automated tool as to avoid false results in statistical analysis. Doing these projects was not a breeze as there were days when I really had to work very hard, there were also days when I realized that the path that I was considering for a certain problem was futile and had to start the entire thing all over again. However, with hard work and perseverance, as

well as guidance from my mentor, I was able to achieve my goal, which proved to be fruitful for the company as well as for me as it lead to me becoming a better programmer. Amazon.in is a great place to work if you want to develop yourself and want to learn how to manage your time well, Since the Deadlines which at a point may sound steep can be achieved with dedication. I have really enjoyed my time at amazon and have learnt skills as well as made memories for life.

Ramith Padaki (2011B3A7441G)

I have interned and worked at Amazon, Bangalore for over 11 months now. I believe that it is truly an excellent place for both technical and career growth. The long nature of my internship spanning over two semesters meant that my team came to trust me on tasks of rapidly increasing complexity. I have had the unique opportunity to dabble in many different technologies such as the Scala programming language, Reactive Programming with Akka, Apache Spark, Apache Kafka, Apache Zookeeper, Hadoop, AWS Services such as DynamoDB, SNS, SQS, EC2 and RDS amongst others. I have been assigned and been a part of both exploratory as well as well-defined problems as projects during my internship. My very first project involved exploring the possibilities of creating a Mobile-App Crawler, as well as the possibility of creating a Honeypot to help capture advertising-exploiting bots. These were projects of exploratory nature wherein the major problem was to discover the problem in itself. Later on, owing to my work on the App-Crawler, I was assigned the task of designing a Crawl Management Service that would offer an Infrastructure as a Service (IaaS) by creating a service to run ad-hoc crawl jobs and crawl web-pages. After completion of this project over 6 months, my next project was involved in creating wrapper/container libraries for allowing deployment of algorithms as Spark Jobs. This library was to help deploy processing algorithms working on the crawled data. This time period over the long period has definitely prepared me for a future in software engineering. One major aspect I benefitted from was the concept within Amazon of two-pizza teams, a concept wherein each sub-team must be of a size that can be fed with two large pizzas. I believe this allows for an extremely dynamic team that can have a close understanding of each other's work and a better sense of accomplishment as well as ownership in the product being built. It taught me to think about all the consumers of code I've written and the need for extensibility. In my process of learning, I found my peers' advice invaluable, especially those from my mentor. I believe the mentorship/buddy program at Amazon allows a strong foundation in allowing peers learn from each other. I learned to focus my problems and solve the problem at hand one step at a time in a swift but organized way. This gave me the confidence that will in the future empower me to tackle any problem at hand. However, it was not all work and no play as during my stay at Amazon, we participated in a team-wide hackathon that my 4-person team won. I find that I've learnt to enjoy my work and I believe this is an invaluable quality going forward in any aspect of my life. Just as the popular Amazon motto, I've now reached a stage where I can "Work Hard, Have Fun & Make History".

Karan katyal (2012A7PS026P)

It is very hard to describe the internship experience at Amazon in a few words. The journey has been splendid and quite memorable for me. There was not even a single day which did not entail any learning aspect. The learnings at Amazon were not only restricted to the core domain but also comprised management, team work and leadership principles. As for my case, I can say I got a whole learning package

in Amazon. The internship program offers a comfortable time for the candidate to adjust and learn the functioning of the team before heading off with the project work which enhances the quality of the work. It is always good to know the team functioning so that you can realize the exact requirement of your project. 5-6 months internship period offers this flexibility. The work culture in Amazon is unique. "Work hard. Have fun. Make history" as they say, was truly blended in my experience at Amazon. The team mates and the manager were supportive specifically at those times when they thought I needed their support. "If you want to learn swimming, you have to go in deep waters", that's exactly the principle my team followed. I learned how to deep dive in any issue before an actual support is required. In this process, I carved out a better of myself. Overall I can say there has been a tremendous positive change in the 11th January 2016 Karan and present day Karan. Thanks to BITS Pilani, Prof. Viswanathan Hariharan and my team colleagues.

Satya Priya G (2012A7PS098H)

I have been allotted Amazon Development Center, Bangalore as my PS II station. For me it was a unique experience to be here. My project involved finding the analytics of a website. The usage patterns and the application behavior of all the clients determine the popularity of website. This analysis might provide root cause of the problem if there is any disappointment in end-user experience and improve the product quality. I had to onboard with the existing tools to achieve the same. These tools were maintained by Seattle teams and to discuss any issue with them was problematic given the time difference. Project was quite delayed due to these external dependencies. As such I was given another task to utilize my bandwidth. It was a simple task of adding feature to existing website using MVC framework. I have learnt to write 'good code'. The best part is, being in the part of working in a 'code quality matters' team will infuse the way one thinks. The exposure to state of the art tools in the online retail business is worth doing. One can also get to know what type of internal communication is followed. Apart from these, there are frequent hackathons, learning sessions and broadcast videos giving you plethora of choices to gain knowledge from. I never felt like an intern who was restricted to do things, rather I got all the opportunity to know about various projects and the flow of things in industry. There is never an end to fun either. It depends on the team actually. I was lucky enough to have team who never ceased the chance to roam around, be it movies, treks or IPL matches. Apart from these, the abundant amount of talent the people here have is amazing. If you want to be best, you have to surround yourself with best. That said, Amazon will be the right choice for people who crave for growth along with perfection.

Mahima Gupta (2012A7PS123P)

I had a great learning experience, working at Amazon Development Centre, Bangalore. I didn't just get exposure to the new technologies, but also to professional work culture. At Amazon, interns are provided full-fledged ownership of the projects. It brings a lot of responsibility on interns hand and hence, gives a great learning experience, technical as well as on leadership point of view. My Major project, here, was on Interface development, which involved frontend and backend development. For this project, the requirements were not clear at first, so, we had a lot of meeting with the business team to get clarification on their business process. This helped me improve my communication skills. Since, front end development, was not a part of my course work, it gave me opportunity to learn and create a lot of features using javascript, JQuery. I also explored AJAX as a part of my project. Along with front end, I worked on the backend development of this service also. I got to work on different databases that are

there at Amazon and learned about new frameworks to connect to different databases like Mybatis, hibernate etc. I also applied database query optimization techniques. Overall, this project gave me exposure to a lot of computer science fundamentals. Along with this, I did some minor projects as a part of my intern. In these projects, I got an opportunity to apply different computer science concepts like read-write concurrency, data structure optimization etc. I also learned Amazon Coral Service development. These projects also gave me exposure to REST APIs. Apart from all the technical aspects, this internship taught me a lot about work life balance, teamwork. This was my first exposure to industrial sector and my team made it very easy for me. Continuous guidance from my mentor and manager helped me better manage my time and improve my skill set, not only technically but also from leadership point of view. The discussions I had with the business people helped me learn to look at the bigger picture of things. Overall, I feel PS2 at Amazon was a great period for self-development and will definitely recommend juniors to give Amazon top priority, while filling PS form.

Chidura Saranya (2012A7PS133H)

I was part of one of the teams of Seller Services of Amazon. Our Project is a new one and I have also joined in initial phase of development. The aim of the project is to help sellers to discover service provider and to manage their product servicing needs and help in day-to-day operations. I was given different tasks according to the requirements. I have been using JAVA, JAVASCRIPT Programming languages to develop the features. I have worked on a number of tasks in entire five months. Each task is a new learning, a new challenge. I worked on Junit tests. This have given me an opportunity to understand the importance of testing and during the process of implementation realized the possible test cases. So this made me more careful while writing code. And also Most of my tasks were associated to Spring Framework. This has given me the clear understanding of it. I have learned the standards of programming, best practices to use, experience in the latest technologies. Apart from technical knowledge, I have also realized how working in industry is different from academic projects. In industry there is a lot of emphasis on correcting the corner cases associated with a given program. The programs are also reviewed by various people to reduce possibility of bugs. Moreover, even while writing a program, a lot of emphasis is laid on making it easy to read, understand and manage. No program is made into production until it is accepted by 2-3 people of same or different team. The feedback from them has helped us in developing new skills as well as refining other skills. Along with my contribution to the team, I had an opportunity to interact with the other teams. In Amazon they are number of resources to gain knowledge. They have internal Wikipedia from where we can understand the internal software's, a platform for technical queries, talk are conducted by employees about their product or any new technologies, team meetings to put forward our opinions or ideas and many more. I have gained hands-on experience and have better prepared for the future. For a fresher, it's a great place to start as there is lot of scope for learning. I believe this will help us in smoother transition from academics.

Anuj Gupta (2014K112192P)

I am part of Junglee Expansion Int/India Team, Junglee is separate subsidiary of Amazon with the vision of helping anyone buy and sell anything online. Junglee is the only online marketplace in India which enables customers to buy new and used products from all types of sellers including individuals, home-

entrepreneurs and micro-businesses. As a part of Buyer experience team our goals is to increase the buyer experience over Junglee.com. Internship at Amazon (Junglee) has been a lot of learning, tremendous exposure. I appreciate the opportunities and projects that were assigned to me, since the projects I have done had huge Business Impact for Junglee. Also, I am happy with the fact that I got to work on something that touched the end customers directly and gave them a more immersive shopping experience with Junglee by giving them relevant trust block messages and seller reviews. The project I have undertaken are based on buyer experience only such as displaying seller reviews on mobile (New Launch), Displaying Dynamic Trust messages based on category. Suppressing Make an Offer Button This PS experienced is great for me because whatever I have learnt in college days I have applied it practically.

Bhanu Priya S (2011B1A7515P)

I did my PS-II at Amazon Development Centre, Bangalore. My team mainly worked on developing website features for the Softlines Categories for the Indian Marketplace. During the term of PS-II, I worked on 2 projects. The first one was based on Web-analytics and involved understanding the impact of feature changes on customers. I got to work on several Amazon-specific web-analytics tools. The work also involved bash and python programming. My second project was based on customization of a website feature to cater to Indian customers. The work required an understanding of the data warehouse, distributed job scheduling and elastic map reduce and most importantly what the customer needs. PS-II was a great experience, both in the professional and personal frontiers. My Manager and my team were very supportive. Several team level knowledge sharing talks were organized, and I was encouraged to present about Amazon-specific web-analytics tools in one such talk. My team believes in the concept of working hard and having fun as well, which made the atmosphere even better. Overall, PS-II was an amazing experience.

Saurav Agarwalla (2011B5A7522H)

I have had a great experience in Amazon so far. Being in one of the top technology companies has its own advantages – I got to work on upcoming products that would be used by millions of customers and I was a small part of the Amazon India growth story. The people I met here are immensely talented and I learnt a great deal by just talking to them. The kind of faith that was shown towards me was a bit of a surprise for me (as well as a huge responsibility in itself) - right from day one, I was allowed to work on production systems that are used by millions of customers. During my internship, I also got to experience first-hand the kind of customer obsession that each and every person working here shows and it gave me a perspective of how great companies are built. I also got a chance to work on various technologies and was given the opportunity to completely own components. As an intern, I had access to all the internal tools and technologies and I learnt a lot from going through various internal wikis and watching numerous internal talks from senior developers and executives. The project I mainly worked on was 'Building an internal tool'. This project aims to enable team members to speedily resolve issues by making common tasks easy to do and thereby saving time. In general, we need to use various internal services to query different databases and perform multiple tasks. This tool would consolidate it to one internal portal which the team members can use instead of having to deal with multiple services. I also worked on 'UCI Migration for India Gift Cards' whose primary objective is to improve the security around the uniquely identifying data of a customer that is involved while creating Gift Cards on Amazon systems. Apart from

these, I also worked on various tasks for upcoming products which I can't mention in detail. The primary skill that I acquired was to write better code. I also got an opportunity to use various internal services and got an idea of how large scale systems are designed. I learnt about the complete process of getting requirements for a new feature to deploying it for use in production systems. PS II has been a great learning experience for me and it has been true to its goal of helping a student transition from college to industry. I got to know a lot about my industry, met a lot of amazing people, worked with some of the best minds of the country and developed skills that would greatly help me in the career that I am about to embark on. I am also thankful for the wisdom shared by my PS instructor from time to time both in terms of sharing his experience and through various articles that he was kind enough to share.

Jemin Patel (2014K112173P)

The overall experience at Amazon Development Center, Bangalore was great and this is what one should expect from any software company. Amazon has very good work culture and flexible working hours make us to do productive work. We can do work from home. You can come and leave at any time. They are giving free cab facilities to all interns. Amazon is known for their hiring process and I realized it when I worked with my team members. I learnt a lot from my team members by interacting with them while I have faced problems. Amazon has great principle engineers and they are giving video lectures and you can learn from those video lectures to get extra knowledge. I was working with Spring Web MVC, DynamoDB, ReactJS and Free marker template. I was working in live project that is one of best thing of Amazon. Interns are working as full time employee. My project was to create Cloud Synchronization services. We can access our account in website and we can also access same account in Android application and iOS application also and in each device user should be able to see consistent data. I created complete authentication layer of this project. I also created front end pages in which I have used ReactJS and Free marker template. I also participated in Hackathon. During Hackathon we created one website related to seller support. We created website using Ruby on Rails. Hackathon event was a great learning experience in short span. This PS experienced is great for me because whatever I have learnt in college days I have applied it practically.

Jimmy Morzaria (2011B4A7200G)

I did my PS internship at Amazon in Bangalore. I was lucky to get my first preference. From my seniors and single degree batch-mates, I had learnt that Amazon is a very good place to be if you're looking to learn industry standard software development. Now, having completed the internship here, I can confirm those claims. I was part of a team called EasyShip which is a seller facing service offered by Amazon.in. The team works on providing a service that allows sellers on Amazon.in to ship the goods they sell on Amazon to their customers. It has been a great learning experience with the team. As far as the specific work that one might get here at Amazon is concerned, it varies a lot across teams. I was fortunate (we don't get a choice or preference of team, but most teams have decent work) to have been allotted a very young and active team that was working on some very high priority and important projects when I joined. I started with the development of a script that our business team needed and after that I was allotted the development of APIs in a web-service that generated compliance forms for goods being moved across states in India. During my project, I got to work with senior SDEs in our team as well as the Seattle team. I was also very impressed by the work culture at Amazon. Employees actually live the famous 14

leadership principles of Amazon. My manager and team mates were always helpful. One small suggestion I can offer to future Amazon interns is that taking initiative here matters a lot. You might not have work for several days here and the days might turn into weeks, unless you bug your manager and ask him for work. Amazon has a very well defined intern to full time employee conversion process and every intern gets a fair chance to become a full time employee. So, getting some quality work under your belt before your internship ends greatly helps in the conversion. Amazon possesses an unimaginable number of highly sophisticated software tools. Getting a chance to work and play around with them is an opportunity one should not miss. To sum up, Amazon is an amazing place to begin your career and I would highly recommend it to all BITsians. I hope this helps.

Niirali Dave (2014H103086P)

As part of my Practice School 2, I interned with Amazon in Bangalore. I arrived in Bangalore a week before the internship date to start looking for accommodation near the office and found a PG at Sanjaynagar which was around 6 kilometers from my office. The atmosphere at office is the most attractive part here. No hierarchy system. We had to call even a senior of about 20 years by his name. Initially I found it uncomfortable as everyone was elder to me. But then I understood the importance of it. It helps an individual to have selfconfidence that no one is bigger or smaller are. You can reach the same position soon. One thing which catches your attention is the amazing office architecture. Every floor had its own theme with marvelous conference rooms, delightful common areas and comfortable seating. Every small thing has been taken care of with utmost attention, from the placement of reprographics to the arrangement of the desks. The first day was a little overwhelming with a lot of people trying to befriend me and asking questions to which I repeated my bio-data like the first day of college. As a fledgling intern my greatest endeavor was to lean the tools and technologies being used at Amazon. As I had no prior experience, I faced little problems in coming out of that college world and understanding how really such a big company runs. My mentor, manager and team members' brain stormed on my project. I was usually part of all the discussions and I also contributed as per my knowledge of understanding. I was assigned India's one of the highest priority projects. I found that I had a great responsibility on my head as I cannot leave until this project is done and I had to deliver it on time. After two months, there were some additional requirements which required design changes. So it kind of hampered my work. Also my mentor switched after two months to another team. After that I had to take all the design decisions, initiate meetings for my project, take reviews from cross-team and do the required coding. Though all this proved to be very helpful, it caught up my time in which I could have coded more and delivered more. I also learnt new technologies and gave seminars on that to my team. I deep-dived into few issues which our team was facing and found a solution to it, saving time of all. I was able to complete my project with the help of my team members. Looking back, I feel it was a right decision to choose Amazon, Bangalore as the PS-2 destination. I had always been out of home for studies. This one adds a new and great experience to that. I learnt a lot about work. My fellow interns were friendly, my team was affable and my manager was empathetic. Our team shifted to Bagmane which is about 21 km from my place. So commuting on weekdays was an issue in Bangalore while weekends were amazing with my friends & colleagues. I am interested in working at Bangalore so I applied for a PPO. My journey with Amazon has been an amazing experience and it would be a fond memory for the rest of my life.

Pushkar Naik (2012A7PS136H)
My experience at Amazon over the course of the PS-2 has been terrific. The last 5 months have given me great insights into the corporate world with respect to its needs in terms of both technical proficiency as well as character. My work here was with a team called 'Associates Fraud' which primarily works at maintaining the integrity of the Associates (affiliate) program at Amazon. The fraud landscape is a continuously changing one and hence you will get to work on real-life problems which have an immediate dollar impact to the company. You will be required to foresee, manage and solve problems which require you to bring in skills related to a wide range of specializations including but not limited to data science, distributed systems and core software development. The single most visible change which I encountered working here was the scale at which the company operates. And as an intern, each and every piece of code you write must take that into consideration. This guarantees that you will be producing industry standard code which by itself should be a great takeaway from any internship. The projects given here would be end-to-end. You are expected to design, code, test, deploy and then even manage your service or application. The learning curve will be steep but very interesting, especially the design phase where you'll get to review and try some of the latest technologies in the industry. Here is where you actually move beyond what was part of your academics in college. Also it's worth mentioning that you'll have unfettered access to all services produced by Amazon including AWS which works on cutting-edge technology is a standard-bearer in the industry. The team members and mentors will always be ready to help and guide you in whatever way possible. There is also a lot which can be learned from senior members in your team not only with respect to technical aspects but also their work-ethic and diligence. You will be encouraged to share your views and comments on the other projects of the team. The management, at all levels will try to make sure that your internship proceeds smoothly. During the course of the internship, I worked on a single project which aimed remodeling of an automated fraud detection service. This included a complete overhaul of the existing architecture and writing the entire service ground-up. As a part of this I had the opportunity to work on many new technologies like Elastic Map-Reduce, Hive, DynamoDB, graph databases, Lambda functions and many other AWS services. Overall, the internship was a tremendous learning experience and I feel that it has been of great help in preparing me for even greater challenges and responsibilities in my career.

Rachit Magon (2014H112175P)
My internship with Amazon Development Center, Bangalore was nothing short of exciting. As soon as the PS-2 station was confirmed, Amazon contacted me for travel and accommodation bookings. I came to Bangalore a day before the internship and checked into a comfortable Hotel arranged by Amazon as part of the offer. The first day was great, I got to know many other new joinees and was amazed to find out that a few of them had given up to7 interviews to get the internship. I was greeted by my Manager soon after the orientation session, who also joined the same day as me. I was told that I would be working for A9.com, an Amazon subsidiary which works on Search, Optimization, Machine Learning and Advertising Algorithms. The first few weeks were spent in learning Amazon specific tools through a course called "SDE Boot Camp" where they teach new joinees about how to write code specific to Amazon systems. Later, after a few weeks of discussion I was assigned my project and was told to create a requirements document. After this, there were prolonged discussions about the architecture of the project and it was only after the first two months that I started to work on the code. It took me around 2.5 months to finish the first cut of the project after which I had a preliminary demo where I was advised many changes and

feature additions. Since the architecture of the project was so well-thought these additions and changes were a cakewalk. My manager really helped me in all aspects of the internship from the code to getting help from peers to finding a good doctor in Bangalore when I wasn't well. The key learning from my internship was that 'coding' is a very very small part of the whole software development ball game. A well architecture solution can be 'coded' within a few weeks and would prove to be very useful in the future, however if a solution doesn't have good requirements and design it would turn into a mess very soon. Apart from the design I also got an exposure of what 'Big Data' actually is and how teams try to find relevant information in Terabytes of data. My internship with Amazon was a great exposure and I would always cherish the memories I made in Bangalore.

Richa Garg (2014H103098P)

My PS station is Amazon Development Centre, Bangalore. I have been working here as a part of JungleeTech team. Past five months have been an amazing learning opportunity for me. I was introduced to various programming concepts and was provided with a platform to implement those concepts. I got to work on many exciting projects, most of the time was spent on latency reduction for MYI Listings Page. For the implementation of the project, I had to learn various new stuff like Dozer Mapping, Akka Actors, Design Patterns, Coral framework, Orchestration framework. Apart from this project which helped me improve my coding skills, there were some other tasks which helped me become more familiar with the various services used inside my team. I also got to work on projects which involved communicating with various teams and helped me understand the entire life-cycle of an order placed on Junglee. Apart from learning various software related concepts, I have also realized how working in industry is different from academic projects. In industry there is a lot of emphasis on correcting the corner cases associated with a given program. Also, the programs are subjected to large number of tests so as to make them as bugproof and future-proof as possible. The programs are also reviewed by various people to reduce possibility of bugs. Moreover, even while writing a program, a lot of emphasis is laid on making it easy to read, understand and manage. These kinds of programming practices are very typical to industry. Practice School experience has also helped us become familiar with the required professional attitude and the working environment of companies. We also got an opportunity to interact with and learn from many professionals who already have a lot of experience of working in industry. The constructive feedback from them has helped us in developing new skills as well as refining other skills. Hence Practice school has provided us ample opportunity to implement the techniques learnt in classroom as well as learn new concepts. I sincerely believe that due to this hands-on experience we are now better prepared for the future and experienced gained here will help in smoother transition from academics

---

Satyajit Ganguly (2012C6PS934H)

I had the opportunity to be a part of Amazon India during my Practice School-II at Bangalore. It was a great learning curve for me. Being in the professional world changes your outlook in every way. It was a privilege working for the India Payments team, the same team responsible for making the life of customers so easy through their biggest successful product launch in the form of Amazon India Gift Cards. Amazon gave us enough time and training initially to settle down and get accustomed to their style of working and allowed us to blend with their work culture steadily. The best thing about the company is that interns and full-times are considered at par. Therefore, interns here get enough exposure and responsibility at work.

Amazon strictly follows the policy of ownership, which means that the one who is assigned a project, has to take complete responsibility and ownership of that product till completion. This instills enthusiasm and confidence in us. It was an excellent experience working with my manager, who has been at Amazon for more than five years, and is so knowledgeable and experienced at managing and getting things done from the Software developers. I was lucky to be a part of a team where my fellow colleagues were always there to help and clear any doubts. I was assigned very motivating and helpful mentors too, during the course of my project work. I was assigned a very interesting project where I had to design and implement a platform for deep health checks for Amazon internal services. The experience was really a steep learning curve for me where I had to think beyond the box and come up with possible solutions to the problem. The solutions are reviewed by senior developers and finally one solution is selected for implementation. The coding work for me was mostly in Java, with concepts like multithreading and spring framework coming into the picture. All in all it was a truly gratifying experience and I would like to recommend my juniors to keep Amazon at the top of their priority list when their turn comes for Practice School-2. Amazon will be the leading mobile retailer delivering customers the best overall experience by providing insightful information to improve better device buying decision making, the biggest selection of carrier plans and options available, the most competitive prices in the market, and the best shopping experience in the industry.

Sudhir K (2014H103024H)

I am fortunate enough to get to work as an intern in Amazon Development Center, Bangalore. I would like to categorize my experience of working here into two aspects. First one is the technical aspect in which I got to learn lot of new things when it comes to programming which would have never been possible in academics because we tend to ignore those things and focus on just writing code. Few examples include how to write code which is testable, how to refactor code so that it improves readability and maintainability and so on. Java was used and I got to learn several new concepts in Java. Some of the things include Java 8 streams and using Mockito library to test our codes etc. The second aspect is about team building and collaboration. I was fortunate enough to be part of an awesome team which always welcomes a fresher with encouragement. I got to learn lot of technical aspects from my team and also most importantly time management and prioritizing skills. My project aims to classify Amazon ads on social networking sites like Facebook and Twitter as good or bad and based on this outcome, remove the bad ads that are not performing well. This is done by looking at the emotions expressed by users on those social networking sites by means of comments, likes, shares etc. The Marketing Managers can then take a decision whether to pull down or retain such ads.   In addition to learning various software related concepts, I have also realized how working in software industry is different from working for academic projects. In industry, lot of emphasis is laid on writing testable and bug free code taking into account all the corner cases associated with a given code. Also, the codes are subjected to large number of stress tests so as to make them bug-proof and future-proof as possible. There is a proper code review system in place in which people review our codes to reduce the possibility of bugs. The PS-2 experience has helped me become familiar with the working environment of software industry. I also got an opportunity to interact with and learn from my teammates who already have lot of experience in software industry. The constructive feedback from them has helped me in developing new skills as well as refining my existing skills. Hence PS2- is a very good platform for students like me to hone my skills and also incorporate the learnings from the classroom in workplace. I believe that due to this hands-on experience I am now better

prepared for the future and experience gained here will help in smoother transition from academics to software industry.

Prateek Jain (2012C6PS392P)

PS2 experience has been terrific for me. It gave me an early lap to closely observe the industry. Learning at Amazon was just exactly what I wanted to gain from my experience of PS2. It gave me a must clearer picture of what I thought to do and what I will be doing. Amazon is one of the companies where you will always have work to do. The engineering skills you learn here are amazing. The complete system of how one to development in Amazon was completely new to me and took me time to grab all pieces together but once learned, the process of developing to deployment seems so easy that a lot amount of pain is taken care of by the tools and one just has to do a few clicks. Also exploring how these tools works, some good engineering can be explored. Though in Amazon, one works more than what is expected in an internship, but its fun to work here in Amazon. The office life in Amazon is fabulous. The peers around are so helpful and enjoying that after a week or so one does not even feel like intern and becomes a close part of the team. Some of the fun highlights are Pizza parties every second week, team outings every quarter, lunch or dinner parties occur to happen at least once a month and much more. There is no pressure exerted by the Manager or mentor to do work. The driving force to do work is the tag of ownership. The developer in Amazon gets the ownership of the project which suppress all layers of hierarchy and one feels so closely associated with the project that it's no longer a company project but one of your own. One thing which is very common is MNCs is the big picture is nowhere known to the developer, what he is programming for and how is it going to affect market and business. But in Amazon, such picture is very clear due to many reasons including the policy of eager development and deployment. Usually one see the projects going to production in very small time. The overall experience at Amazon has been fabulous and learnt a lot over the complete intern. Amazon gave me a great start while entering the industry and hoping this experience will act as a great boost in future.

Nagaprasad K P (2014H103025H)

PS-2 was bit challenging and interesting. I got to learn lot of things including the domain knowledge of my team. I got to learn new technologies and industrial standard practices in developing a software. Practical knowledge in current technologies like no-sql databases, Spring MVC, writing unit test cases are gained. Expiration Date Audit is a project consisting of applications for auditing the expiration date printed on the label of the items and the ones stored in database in Fresh Fulfillment Centres. The project consists of a web application that will help FC associates in managing the audit process and to view the audit history reports. Also, it consists of a hand scanner tool that helps the FC associates in auditing. Project required strong java skills with additional frameworks such as Spring, MVC etc. I was able to acquire these skills by looking at the existing project code base and small tasks given during initial days of my internship helped me in gaining those skills. Additionally, writing queries for no-sql database, writing test cases were also challenging. Our team was a relatively new team. So there was a kind of start-up culture in the team, which helped me to explore and learn a lot.

Amirtha (2011B3A7581H)

My internship in Amazon for the past 5 months mainly evolved around working on web development which included making changes to the amazon.in website depending on various use cases. The use cases concentrated on improving the over-all delivery experience of customers on the website as well as Amazon mobile app. The technical aspects involved using languages such as Java, JSP and Perl/Mason. I also got a chance to work on the mobile android platform and gained experience of Android Studio. One of my projects also involved using the HTML5 Geolocation API and I learnt how to use it in a java project. Attaining these skill sets mainly require you to learn from practice and mistakes. The code reviews in this company are taken quite seriously and the team members ensure you come up with the most optimal code and it is written properly. Some of the projects which needed to be started from the beginning required the skill to dive deep into the problem and come up with a solution. This can be attained and improved only via experience. On the technical side, some of my major take backs from this organization are the ability to write industry level accepted codes. Also, I got to work on projects which were to be started from scratch and hence developed my ability to deep dive into problems, figure out their dependencies, come up with a design and finally implement the code. This experience also taught me simple but essential things such as how to talk with partner teams, communicate your issues comprehensively and accurately. Asking appropriate questions and over all team work. This time period has definitely prepared me for a future in the industrial side of Computer Science. My main source of motivation throughout this period of work was the faith and responsibilities my manager and other team members had entrusted me with and the satisfaction of being able to stand up to their standards. This would definitely be my biggest achievement here in Amazon.

Mayekar Pranav Rajendra (2012A7PS092G)

My PS station was Amazon Development Centre, Bangalore. I have been working as intern software developer with the In Tech department for the past few months. On the technical side of thing I worked mostly in Java along with some work on the Ruby on Rails framework. Over the past few months, I have learnt that industry development is significantly different from academic software development. There is a lot of emphasis on testing one's code thoroughly in the industry. This is a stark difference from academic development where testing is ignored entirely. Also, in the industry, all code is subject to code reviews and hence every line of code is seen and vetted for by at least two people before it is considered to be production ready. Scalability and maintainability of code is also given much greater importance. Documentation of the same code is as important as writing the code itself and there are instances where documentation can take more time than the actual development itself. This is to ensure that in the future, the code can be maintained by someone who has no prior experience working on the code. At Amazon in particular, there is a great focus on the principle of ownership. You are expected to 'own' your code, you are expected to take initiatives to improve it, you are expected to test it (most teams lack a dedicated QA) and you alone are responsible for the success or failure of it. You are expected to do this because you 'own' it and not because your manager or any other person told you to do so. There is also a deep emphasis on team-based development. Since Amazon is a very large company and comprises of multiple separate enterprises, the code base is also split at a very fine level and individual teams develop and manage these individual parts. All the members of a team are expected to know all parts of

the codebase its own codebase so that any member can work on any part. There is no demarcation between a front-end engineer and a back end engineer. Everyone is expected to work on everything. This ensures that everyone develops a more rounded skill-set and are more flexible in their areas of expertise. To conclude, I would recommend this PS station to anyone who wants to do hands-on   software development while also experiencing how a large MNC operates. Since developers at Amazon are required to work on end-to-end development, whether it be front-end or back-end, it helps you develop a diverse skill set. I can sincerely say that the experience and the skills I have   gained here will help me a great deal in my future career prospects.

Yogya Chintalapati (2012A7PS099H)

My PS-2 was at App Store Developer Tech, Amazon Development Centre, Bangalore. This 5 months of internship provided me lots of experience in developing my technical skills. I got the exposure to many frameworks like spring and hibernate. I learnt to recognize the right and the wrong ways to do a task. This internship experience at amazon provoked me to think big while designing a solution. I learnt to work with distributed systems and figured out the difficulty to get simple things in place for distributed architecture which otherwise would have been very simple in a single host. I learned to build and design solutions which are easy to modify and scale. I had the opportunity to interact and learn from some great developers at amazon from Seattle. The culture at amazon helps you to develop and sharpen your technical skills by learning from your peers. There are regular brain storming session for design problems where you gain a lot of knowledge. Weekly Friday learning series sessions by peer members of the team help in being up to date about the happenings in your team and share knowledge. My managers and mentors were always very helpful in guiding me to the right point of contact for every problem. The best part of amazon is that you get the independence to speak out your thoughts and voice your concerns. I learnt to not shy away and be bold enough to express my views in a large audience. Finally I would like to point out that one who is yearning to learn something has infinite options and opportunities to look forward to at Amazon. I will be very thankful to my institute BITS Pilani for providing me an opportunity to gain such a wonderful learning experience.

Company: Amazon Development Center, Delhi

Priyanka Bansal (2014H112187P)

This PS gave me totally different and amazing experience.one of the important aspect of an Organization from employees point of view is working culture he is kept to work in, in amazon environment is friendly. we interns were given the same respect and treatment as any other employee even our sits were besides our manager. The major learning that I acquired in my 5 months exposure at Amazon Development Centre, one of world's most prestigious organization, are twofold. The first was the technical aspect of things in which I was introduced to many different programming concepts and the second was of character building. The technical aspects include me mastering various concepts necessary for working on real time software or projects and also acquiring the skill set to tackle the problems relating to Level of service criteria. Apart from this aspect, the humility and social interaction I saw in my team has left its impression on me and will help me go a long way. This time period has definitely prepared me for a future

in the corporate side of Software Engineering. The immediate exposure to real life problems in the industry along with responsibility attached with the work that I conducted has left me with a sense of professionalism and taught me office-work ethics. The project was automation of Workflow used at Amazon for merchant Registration. This was basically to reduce the manual efforts required to upload new workflow whenever there is any change in workflow previously. This project helped me in improving my technical skills. Apart from technical growth In my time here, I learned how to work alongside other people and learned the true meaning of teamwork and how important colleagues are in an office space. From my seniors I learned the way to guide a person working under me. The way my mentor listened to my doubts and provided me with the right amount of help, not too much but just enough to set me in a path of self discovering the solution. As Amazon is among the world's biggest retailers in market and such a pretty experience from big brand I have never thought of now I would like to fold by saying that working at Amazon has left me stronger both cerebrally and spiritually. This has been an experience of a life time and has definitely made a better engineer and a better person. My major accomplishments include not any medal or certificate but the trust and confidence and learning that my mentor and teammates showed in me while doing the work load. My ability to solve the problems in the way advised and also in the time allotted is definitely an accomplishment for me.

Abhinav Misra (2011B2A7580G)

I joined my intern at Amazon on 18th January 2016 as Software Development Engineer Intern. I was fortunate enough to work on some cool projects, which helped me grow as an engineer by developing my core skills and knowledge. The discussions with my peers, regarding the designs have provided me with deep insight to OOP principles. I have learned that it is important to be biased for action; there can be N number of solutions to a problem but we got to choose that is the best for us, both in terms of resources and sustainability of the code. The technologies that I have worked on-Java, Dynamo DB, SQS, and other AWS tools, UI frameworks like AUI, etc. will provide me an edge in my career ahead. Today everyone is using these Amazon tools to get their work done in a simpler and easy way, having a good understanding of these will enable me to mark out my presence among others. There are very talented people at Amazon, I make sure to read the code written by them as it not only makes me understand-how, when and why to use features of Java but also introduces me to some new Java8 features-like streaming functionality. To conclude, I will say, the practice school program of BITS is simply awesome. This provides us with the opportunity to implement what we learn in college. It also gives us an environment, where we can dive deep to understand how things are working in world and make our decisions wisely for our career ahead. I will say these six months should be used to make mistakes, learn and grow from them, have a thorough understanding of our subject, so that when we enter our industry as full-fledged engineers, with BITS Pilani degree to back us up, our peers should have nothing but respect and appreciation for us. In short, the goal for internships should be nothing but excellence.

Company: Amazon Development Center, Hyderabad

Atul Mittal (2011B4A7861P)

I joined Amazon, Hyderabad on 11 January, 2016 as a SDE-Intern. Since the start, I was given a very challenging project on work on where I had to take the ownership of the task all by myself. The project was very important to the team as it was related to the wave of migration which was currently in full swing over Amazon worldwide. The first part involved a thorough research on the problem statement. I was fortunate enough to set up design meetings with the senior members of the team, which helped me understand how a design is decided upon, what all parameters are considered while finalizing a design. The discussions with the team members regarding the design and implementation has provided me a deep insight of object orientation principles. I worked on technologies like AWS Data Pipeline, Dynamo DB, SNS, SQS which are used by most of the companies in some way or the other. So, having a good understanding of these will enable me to mark out my presence among others. PS-2 provides us with the opportunity to implement what we learn in college. It gives us a platform, where we can dive deep to understand how things are working in professional world and make our decisions wisely for our career ahead. However, I would like to highlight one of the main difference between college and the experience at Amazon is that at BITS we never had to worry about scalability, availability, memory management etc. At college the main aim is just to write code which is able to achieve the final outcome. Now, though we realized the importance of a solution that is not just correct but also scalable, efficient and crucially reliable. That's the importance of PS.

Company: Aurigo Software, Bangalore

M.Manasa (2012A2PS443H)

Aurigo Software Technologies Pvt Ltd provides cloud-based capital program and project portfolio management software for infrastructure owners. Their software "Aurigo Masterworks" automates capital planning and program management processes to help capital infrastructure program owners plan and deliver mid-sized to large capital programs. Its clients include large capital program owners in North America including Colorado DOT, Utah DOT, Oregon DOT, Port of Portland, TransCanada and a host of others. In the initial days, I had to be a part of the team that was responsible for preparing exhaustive training repository for Business Analysts in the company. Being a part of training team has helped in exploring the software in-and-out and enhanced the knowledge on the Business needs behind each feature in the product. For a brief period of time, the work included analyzing all the forms and features developed in various projects. This helped in understanding various typical requirements in the projects and facilitated in drawing insights on the common needs in these projects which can be made a part of the base product. After the preliminary weeks of training, I was assigned as a Business Analyst for the project Capital Delivery and Management System(CDMS). The project focusses on customizing the product, "Aurigo Masterworks", to design functionality that conforms to the needs of Ministry of Transportation, Ontario. The major skill set required for the project is the knowledge of Aurigo Masterworks. The knowledge acquired during training facilitated in understanding the customization done for CDMS and the team members and my mentor have been really helpful in guiding me on the business model that is being followed in the organization. I have obtained a deep understanding of the software module, analyzed the client requirements, documented the approach to be taken to implement

them and monitored the Development and Quality Assurance of the requirements' implementation. Such implemented requirements were delivered to the customers and I am working on maintaining and enhancing the same for the next release. I am the only Business Analyst who has been currently working on this project and I think being a part of this entire process is a good achievement for me. I have learned a lot in the process and have helped in developing something that will have some real consequence. Needless to say, I have learned good management skills through my PS-2 which will help me in my future. Now I think I have a general idea of how things work and hence will be better equipped to step into this world. I have also learned how to interact with people on a professional level. I sincerely thank BITS-Pilani for providing me such an amazing opportunity very early in my life.

Tammineedi Mahitha Sree (2012A2PS446H)

Aurigo Software is a global software company that provides cloud based capital project management software solutions for large capital infrastructure owners in the public and private sector industries. Their flagship product, 'Masterworks' automates every phase of the capital project construction lifecycle. Being a civil engineering student, I was able to understand the product quickly after going through the training decks. I worked with the technical writers of Aurigo in preparing quick start guides and training material about the product for business analysts. Business analysts at Aurigo are primarily responsible for identifying the business needs of customers and stakeholders and delivering 'Masterworks' successfully. Hence training BA's on the product was critical. Being part of the training team has been a wonderful learning experience. I got to know the product better and was applauded by Harini Anil, Director of Product Management at Aurigo. After the training program, I worked in the role of Business analyst in CDOT team. Colorado Department of Transportation (CDOT) has signed a contract with Aurigo to implement and support Masterworks across the state. Being a part of CDOT team has given incredible learning opportunities. There was a lot of non-textbook knowledge I got here. While gathering requirements from the onsite team, I got to know the importance of understanding something to its deepest possible and being very clear about it when explaining it to the team. I understood how important my basic concepts need to be for the developers' team and myself to be on the same page when discussing about something. I learnt to drive meetings, give walkthroughs to the offsite team and demos to the onsite team. I realized inter-disciplinary knowledge is important to work across cross-cultural teams. My knowledge base was broadened by learning about the processes followed by DOTs of USA and Canada in Capital Project Management, integrating software application with third party systems using FTP solutions, doing impact analysis of the requirements given by customer, studying and applying agile methodologies. All the work I did here was completely new which we was never taught in college. I understood how different the industrial exposure from classroom experience is. I must say that PS – II program has really helped me look beyond the academics, made me more result oriented.

Kushagra Gupta 2012A2PS535P

Aurigo Software is a global software company that provides cloud based capital program and project portfolio management software solutions for large capital infrastructure owners in the public and private sector industries. My project include development of intranet website using word-press Content management system .This gave me first-hand experience about working with website as I had to build it from scratch. Following the completion of that project I was assigned the task developing plugins for the website. Then I worked on analysis of big data using hadoop framework which is required to find the hit rate of the pages and the URLs visited most recent visitors. This task was especially challenging since I had to use python modules for hadoop which was a totally new domain to me. The above mentioned projects require the knowledge of HTML, CSS , Javascript, PHP, Python. It is recommended to have prior knowledge in these topics if one wants to apply at this station. The overall experience of the internship was gratifying. There is ample opportunity and requirement for self learning.

Company: Avaya India Private Limited, Pune

Sarang Agarwal (2012A3PS188G)

I was allotted work in the Solutions Testing team at Avaya. What this entailed was that I was required to create a Web Browser based tool that could be used to look at machine statistics with various other features. The required skill sets were an understanding of basic web development, such as HTML, CSS and Javascript. I also needed to figure out how to use other languages, such as PHP, Ajax, Python and MySQL to interact with the created web page. Being a student of Electronics with no prior exposure to any of these languages, I ended up spending a lot of time browsing through various online resources for the littlest of questions. In my opinion, PS2 is probably the best way to introduce students to the industry. The change in environment from college is immense, and having to face it directly as an employee might be a bit too much for a few people. PS2 gives you the opportunity to interact with a lot of professionals who have eons of experience in their chosen field, and their constructive feedback helped us in developing new skills as well as refining other skills. I sincerely believe that due to this hands-on experience we are now better prepared for the future and experienced gained here will help in smoother transition from academics.

Ruthwik Masina (2014H112182P)

In my 5 months with Avaya, I have worked on Natural Language processing project. The project was to create a working software which captures the conversation from a chatting application integrated with chatbot and get the customer satisfaction level using sentiment analysis. Although I did courses like data mining but Natural Language Processing is out of academic course where I have to learn myself from online websites. In the process of working I learned to use algorithmic knowledge and also improve my problem solving skills. During the project, I was helped by my mentor and colleagues. We had discussions and meetings where I had a good learning experience. I was also involved in development of Avaya's product Cobrowse. I was given the task of integrating a new object oriented DB called InterSytem Cache. It was a challenging task and I was able to do it with the help of other team members. It was a rewarding experience. On learning front, my internship at Avaya was a great experience. I got to work with people

with significant experience in programming. Working in a team with them was an intense as well as fun experience. Though I was an intern, I was given some very research oriented projects. I would like to continue working on some concepts on my own, further down the road. Internship at Avaya has been a rewarding experience.

Shivanshi Gupta (2013H313091H)

I was allotted work in the End-points team at Avaya. We were given Avayas' Communication Manager products (CM) and asked to debug the existing test cases, and write new ones. The required skills for my project were a basic understanding of Java (to understand the project they had given to me, as well as to understand the given test cases). I also needed a few lessons on running the JSystem and the Android Debugger (ADB). My mentors at Avaya were more than willing to help me out with any doubts that I had, and in general, made sure I was never stuck with one thing for too long. Frequent KT (Knowledge Transfer) sessions were conducted initially, to ease my transition into this new field. In my time here, I learned how to work alongside other people and learned the true meaning of teamwork and how important colleagues are in an office space. PS-2 helps one to build their persona, knowledge base and interact with industry experts. My experience at Avaya will surely have a very positive light on affect my career. It has ensured that I have the necessary capabilities that I do not find myself out of depth as and when I take up a new job.

Parni Jahnavi (2011B4A3614H)

In my ten months with Avaya, I have worked on various projects, many of them experimental. My first project was to develop a tool that will help user in predicting regression areas for testing using text data available on them. I am from mathematics and EEE background, so I had to prepare a lot to be up for the task. During the preparation, I was helped by my mentor and colleagues. I was first given the task of finding out which programming language will be helpful and what algorithms to use to predict desired outputs. I found that Python is very helpful in this area and started working with it. I had to study the NLP techniques to use. The tool developed was pretty useful in the testing phase. I was also allotted to make changes to a tool company uses for call management. We worked on C# for that project. It was a rewarding experience. My second project was to check if JMeter can replace Silk Performer as a performance testing tool. I comprehensively studied both the tools and used Jmeter to perform operations that can be performed using Silk Performer. On learning front, my internship at Avaya was a great experience. I got to work with people with significant experience in communications and programming. Working in a team with them was an intense as well as fun experience. Though I was an intern, I was given some very research oriented projects. I would like to continue working on some concepts on my own, further down the road. Internship at Avaya has been a rewarding experience.

Saurabh Kumar (2012A8PS372G)

I worked at Avaya for 5 months in the ACS team. I did a couple of projects in the entire duration of my internship. My first project was an interesting one because it involved social media which every youngster is a fan of. It involved making a gateway so that the people (clients or social media users) can interact easily with the contact center agents through social media. Being from an Electronics background, I found it tough at the start but later on with the help of my guide, I was able to build things which were only ideas before at Avaya. We could engage social media users (on Facebook) to directly communicate with contact center agents in real time. We also had a demo to one of the top officials from the US office. It was an amazing learning experience, both in the technical and professional sense. My second project involved working for their product AADS. I got a chance to write Junit Automation Test cases for ACS and contribute towards increasing code coverage. Frankly, I was the only one doing it and it was appreciated by my manager and mentor through mails too. I got to learn exception handling, mocking and the true value of testing for any product development. While I was writing the test cases, my other team mates continued writing the main code. Thus my code proved to be a test driven development for the product. Apart from the technical skills that I acquired, I got to learn how different to work on a project in an industry in comparison to academic projects. Industrial Practices like code review, improving structure and quality of code and documentation are very important and significant to the development of quality product for the customer. I believe this experience will surely help me in my future prospects. PSII has been an exceptional initiative taken by BITS-Pilani to bridge the gap between academic learning and the industry expectations. This hands-on experience proves to be very useful for students further down the road in their career.

Arjun Ruhatiya (2012A7PS090G)

I was assigned to the CM (Communication Manager) team at Avaya. They asked me to work on the website they were using for the testing of different patches on CM. They wanted me to create a new platform on the website for completely new type of test Setup. The required skill sets were an understanding of basic web development, such as HTML, CSS and Java-Script. The existing website was coded in django and python. I needed to learn these languages before I could understand their code and get started with my work. I spent a lot of time studying these languages on internet but what really made me understand the language was when I tried to understand how their code worked comparing the code with the languages I knew like HTML and C++/java. Then trial and error helped me in getting thorough with language. I also had to learn shell-scripting for the project but the language was comparatively easy. During my time here, I learnt a lot of things. Starting with how the company actually works, how the work for a particular project is done by a team and not by a single individual. PS2 gave me a platform to test my knowledge practically and in a better way and also gave me a chance to work with the professional and get their guidance. One of the most important things we get to learn in PS2 while working in the company is the way to get things done quickly and effectively; which is what matters the most. I feel that working in a company as an employee and having to face deadlines gives us a lot of maturity in terms of everything. The deadlines even helped me in working late nights in the office if needed. I am sure that this Internship/PS2 prepared me for the future and gave me the best idea of what I am required to learn for my future. PS2 helps us know what areas we lack in college which are really important and makes us strong enough to work in a company as an employee.

Company: Belong.co, Bangalore

Himanshu (2012B4PS698P)

I worked at Belongin the Data team for 5 months which was a great learning experience for me. My project was called Data was acquired from various online, offline, internal and external sourcesalike. Then relevant information was extracted, parsed and standardized. It was stored on a central Elastic Search server and then securely provisioned using Flask. A Quality Check mechanism was also implemented. However, the scale of the project was at the heart of the problem as this data comprised of around 30 Million documents from different sources and hence different formats and structures. I was privileged to work in a growing startup, as you get to experience growth and scale at the same time. Before coming here, I only had a basic working knowledge of Java and Python. However, over time I learnt a lot more of both and more importantly about backend development and big data management in general. The constant faith my mentor and my team showed in me was very encouraging. Belong is a place where everyone takes ownership of the work they do. You get to work on individual projects, ship products and results and see changes being implemented in front of you. That is a huge boost in confidence. There are a lot of BITSians in the company to guide you in practically all aspects of your life here. The most empowering aspect of my experience at Belong was the monumental amount of responsibilities that were endowed upon me which in turn made my internship exposure feel no less than that of an employee. The work culture of Belong has been a very productive one for me as there are flexible timings that allow you to work when you are at your best and all the employees are very approachable. This teaches one to value success rather than the process and thus the power of efficiency and collaboration. Overall, it was a wonderful experience working here. I would recommend Belong to anyone who is looking to learn big and willing to work hard.

Shubham Agarwal (2011B4A4557G)

Working in one of the fastest growing startups of India for 5 and a half months had a huge impact on my professional career. The major learnings I acquired included technical aspect of things and character building. The technical aspects include me mastering SQL, Excel and gaining a working knowledge of R and Tableau. I worked in Product Analytics team which helped improving my logical thinking and analytical abilities. Extracting logical inferences from raw data and suggesting useful changes in product on basis of that data, made me think from Business point of view as well. Gaining technical expertise was an easy task with real life problems in front of you. And video tutorials of course! Coming to the latter part of learning, the amount of freedom I got here to work on things I like, was unparalleled. The humility and trust everyone shows in you motivates you to work on new things. The office culture is also very good. You can approach anyone directly (including the CEO) for any sort of assistance. Working hours are very flexible and office has an amazing infrastructure (including in-house chef, bean bags, mattresses, TT table, their own terrace, PS3 etc.) In my time here, I learned to work alongside other people and learn the true meaning of teamwork. There are stand-ups and demo days in which you can showcase your projects and ideas, and it's a wonderful feeling getting applauded from everyone and getting suggestions for improvements. Majority of the crowd here is BITSian (including all co-founders), which gives you a very homely feeling. My major accomplishment here does not include any medal or certificate but the trust and confidence that everyone at Belong showed in me. Experiencing a start-up culture was an amazing experience for me.

Company: Blue Jeans Network India Pvt. Ltd., Bangalore

Aastha Poddar (2011B3AA567H)

I was looking for a career direction and to gain confidence in my abilities. My internship at BlueJeans Networks gave me the opportunity to try out an industry which I had not previously considered and broadened my horizons. It prepared me for the working environment, which people have struggled with having gone straight into work from university, enhanced my CV and helped me negotiate future jobs. Blue Jeans has grown immensely in the last year. Our CEO is someone that does not lack in transparency and integrity. Beyond our CEO, our management team and employee group is full of bright and collaborative people. People are very cooperative and helping. They actually care about the product and fellow colleagues. People are given full ownership of the project and are helped by mentors whenever required.

Ankita Kar (2012C6PS763G)

I started interning here on 12th January 2016. We were introduced to basic architecture of theBluejeans Products: MeetMe & PrimeTime. After 3 days of rigorous training we were assigned our teams. I was allotted NonFunctional Testing team. I was in the tooling division. So, my job was basically to develop tools that automate i.e. ease the process of testing.I had to develop a webApp using ruby that did the analysis of the load & AWS tests done by the team. I started off by writing very small code snippets with the server being Sinatra. This exercise helped me understand ruby, APIs and how the webApps work. Eventually I went on to my own project: Intelligent Reporting where I had to write APIs in ruby and develop frontend(JS & Jquery) that generated reports using templates, comparing those reports and enabling the users to make new templates. I also learnt how to use mongoDB for projects.The final part of the project which happened in the last two weeks were fixing bugs faced by the users, adding information to make it usable by a first timers & documentation of the code.The experience at Blue Jeans was highly enriching and informative. It helped me gain my coding skills and made me better for the industry. I learnt how to communicate professionally. Now after the experience, I want to work as a full stack developer as I understand a complete webApp works and want to go into fulltime coding. The work culture of the office is extremely good. We with our teams go for regular outings making sure that we don't miss out on fun part either. The food provided is awesome there.It's a great opportunity to work at Bluejeans. There is always a balance of work & play. One thing to keep in mind is they have a hiring freeze now. Otherwise, the company does offer PPOs.

Bhavana Sanagapalli (2012C6PS445H)

This is about PS-2 experience at BlueJeans Networks, Bangalore. This station fulfills the purpose of the practice school as it helps the student not only to develop technically but also professionally. The company has a great work culture and people are very approachable. Be it your mentor or your manager, everyone is helpful and can be reached out easily for any help regarding your project.Coming to the work, it mostly depends on the team allotted. The company has 3 major teams. One deals with the front end UI of the website and app, next is the team which develops API's to support other teams and last is the team which

does the core video processing related work.I am into the UI team and my work mostly is to fix the bugs in the existing code base and addition of new features to the already existing ones. The work may seem obvious and easy but has its own challenges. A good knowledge of JQuery, backbone.js and node.js would be helpful. A must to say, the code is very neatly organized and layered so that anyone looking into it for the first time can easily understand it. The code is easily scalable and maintainable.Apart from gaining technical knowledge you would also be exposed to the software engineering process which is learnt in our college. Write from the requirements analysis to the testing you can experience each and every stage of software development life cycle. The work is neatly distributed among different release cycles which is generally a period of two weeks.Apart from technical knowledge I also learnt how to work in a team and conduct our self in professional environment. Finally I would like to wrap up by saying that PS-2 at BlueJeans has been a very good learning experience. It provided me a good industry exposure and prepared me for the future.

Moyukh Biswas (2012A7PS063G)

With a bloated ego we emerged from college confident that we had what it took to take on the world. Practice School 2 was where I realised that we didn't- we still had plenty to master. The learning curve was steep, the deadlines were short and the final product was a prize in itself. In six months, I can proudly say that I have learned ReactJS a library on top of Javascript so ridiculously well that I can start contributing to its codebase- when fresh out of college, I had little idea of Javascript itself. BlueJeans was a humbling experience. It taught me that there are way better coders than us hot blooded graduates- and we have something to learn from each of them. To quote Martin Fowler, "Any fool can write code that a computer can understand. Good programmers write code that humans can understand."- I learnt to write code that scales, code that's maintainable and readable- something I never factored was even important during my years of college. At the end of the six month long day, when your manager pats you on the back and tells you that you did a better job than he expected- it's a reward in itself- the work intensive hours, the endless brainstorming were all worth it. Deviating from my internship-end epiphany and coming to the company itself Bluejeans is a really good place to work at. The work is challenging and you get to learn a lot. The people are great and the food is amazing (and free). I was a little apprehensive about being allocated this station (there were "better" stations for my CGPA), but if I were to choose again, I would choose BlueJeans a hundred times over.

Nimish Sharma (2012A7PS086H)

BlueJeans has been a wonderful experience for me. I had great fun learning new technologies in these five months. This company is not all just about work. We have been to numerous outings as well as enjoyed various indoor and outdoor events such as scavenger hunt and football tournament. But the best part is the people working here. They have been very helpful since day one and are like totally chill. Overall it has been a fun ride for me.

Shalaka Somani (2012C6PS718P)

I did my PS2 at BlueJeans Network, Bangalore. It is a startup which provides a cloud-based video conferencing service that connects people without any time, place or device restriction. They supports a wide range of devices and conferencing platforms making their service very easy, compatible and affordable. Their aim is to convert every phone call to a video call. The work here is precisely designing the technology to make that happen.I was a part of the Desktop Media Team at Blue Jeans. My project dealt with video rendering enhancements. I started with understanding their plugin's architecture. I had to read up in detail about Win32 Programming, Direct3D Rendering and other renderers. I was able to identify algorithms for video quality improvements. I had past experience with Image Processing. But Video was a new domain for me. With the growth in media in current times, video quality improvement is an important field which is yet to be explored to its fullest. The team here at BlueJeans is very helpful and extremely enthusiastic about the work. The weekly sprint, daily status updates and company all-hands gave me an insight of the work culture. There are regular events and team outings to create a well balance between work and fun.This corporate exposure brushed up my knowledge about existing technologies and market terminologies. It has helped me evolve my thought process from a student's perspective to an employee's perspective. Overall it was a good learning experience for me.

Suraj Rajpal (2011B5AA459H)

It's was a great opportunity for me to work for Blue Jeans Network which is a Bitsian startup. It's a very good company to work in, everything about the work culture and the people here are very helpful and I have learnt quite a lot here during the internship. I worked for the QA automation team for the Primetime team and I worked in API and UI automation. My main project was to automate the testing of web socket notifications where I had to make a new framework which will be used by the team henceforth. This is a great company where apart from work there are regular team outings, sports events, etc.The 5½ months practice school experience helped me to imbibe corporate culture. I have learnt to face complexities and to manage expectations, all in a fun and safe environment. The work has broadened my knowledge of programming which would certainly augment my future career prospects.

Company: Bundl Technologies Private Limited (Swiggy), Bangalore

Kavya Velisetti (2011B2AB741P)

Through this internship experience, I learnt how to use various tools such as Excel, MySQL, HTML and social media ad platforms. I believe that the skills I've acquired through the course of the internship build a strong foundation for future projects that I'd like to work on. In addition to the above, this experience has taught me to work and manage a team in a professional manner. Swiggy is a fast-paced startup where certain processes happen at break-neck speed and I've learnt to deal with stressful situations in a calm and collected manner. This internship has also made me realize my interest and aptitude for the field of marketing. This has made me plan my career accordingly. I plan on working for a few years and then pursuing an MBA in marketing. My biggest achievements in this internship were to be able to optimize communication between the central and city teams and automation of design processes. I have also obtained a PPO from the company and will be joining as a full-time employee from July onwards.

Radhakrishnan T (2014H10302026H)
Swiggy has developed an android application and a website for ordering food from restaurants online through website. The customer places an order using mobile phone or computer. The placed order is assigned to a delivery boy either automatically by order processing system or manually from UI dashboard. I worked on the automated order processing system of Swiggy. My project involved working on the components of the full stack of software that deals with automated order processing. I worked on multiple features related to improving the performance of the system and optimising the cost and time of order delivery. The skill sets required for the projects were Core Java, spring, Hibernate, Django, Python, HTML, Javascript, Jquery, Redis, MySQL and RabbitMQ. Few of these skills, like Core Java, was learnt from my previous work experience and academic projects. For web development and technologies like Spring and Hibernate, I learned from training videos and internet resources. I have read Django from Django documentation. In the initial days, it was very tough to get used to the newer technologies like Django. My mentor and my team-mates helped a lot during the course of internship. My learnings from the PS-II experience is on the following areas – Software development skills, Software Design Skills and Soft skills. In terms of software development skills, Swiggy followed the lean methodology of developing a software feature in the shortest possible time without compromising on the quality. Object oriented programming languages and frameworks are being put into great use for rapid application development. In terms of Software Design, I practically learnt about how to make independent applications to talk to each other through messaging or through a common persistent storage like databases. This lead to developing independent smaller components and thus increasing the stability of the software system as a whole. In terms of soft skills, I learned good email communication, following up on work items pending with other teams, pro-active communication and presentation skills and verbal discussions. The technology stack used at Swiggy is very recent and getting to use all the recent technologies together for building a complex system is a great learning for me. My major accomplishment during the internship is the software developed for generating cash report of each food order. It is one of the critical piece of software delivered during the PS-II internship. It is used by the finance team of Swiggy heavily to validate the cash inflow/outflow of every food order.

Company: Bundl Technologies Private Limited (Swiggy), Mumbai

Suyash Tirodkar (2011B4A3665P)
A quick online search for the word Swiggy throws up, "something unbelievably legitimate and real." This was definitely how my year long experience at this budding startup was. It shaped me to actively and innovatively handle challenges as an indiviual as well as the part of a team. I joined Swiggy as a PS2 intern in July 2015 in the same week that Swiggy launched in Mumbai. In the first semester I worked as a part of the launch and expansion team to establish Swiggy's foothold across the city. We worked to evaluate and categorize target accounts and on-board them on the platform accordingly. While managing these accounts, we also improvised and ran marketing campaigns to increase visibility. In the second semester, I shifted to the operations team and helped setup various SOPs in place to improve operational efficiency in line with the rising demand for the service. The work here was very data driven and the theoretical knowledge I had gained as part of my Mathematics curriculum in college stood me in good stead. I also had to learn MS Excel and SQL to implement the desired data analysis. Swiggy's biggest strength was its team. Being a Bitsian startup, it was a great experience to have your college seniors as mentors. I was given complete ownership for the work I was tasked with which in turn made me accountable for my

actions and, thought me the self-discipline required in the industry. Since I was a part of the expansion phase of Swiggy's short history, it was exciting to experience the rigors of working at a fast-growing startup. The Practice School II program provided me with a unique opportunity to be a part of a company which grew from its nascent stage to become one of the leaders in its segment within the span of a year.

Sahil Aggarwal (2011B1A2820P)

I completed a one year long Practice School-II with Swiggy, Mumbai. The overall experience of working in this hyper-growth startup and seeing it transform from a nascent startup company to a leading player in the food-delivery market has been an absolutely brilliant one. During the last one year, I have sequentially worked on multiple work-streams, each giving a lot more ownership and learning than the previous one. I started off the first semester by helping the launch team start the business in the city of Mumbai. This was what we called a 'Startup within a startup' experience and involved doing a variety of tasks viz. taking in the first ever hungry customer call at Mumbai office, helping on-boarding efforts for delivery boys and even delivering an order when we ran out of enough delivery supply! Within one month of the launch, I was transferred to the operations team. Here I was tasked to work with the operations management team to help setup and implement scalable processes to ensure business serviceability across the Mumbai region. This basically involved drafting SOPs, training the on-ground teams and developing data dashboards for continuous monitoring. Over the period of the next four months, I took complete ownership of multiple modeling related work-streams in the operations team including payout incentives for delivery executives, supply planning for hiring targets and even fraud detection algorithms for absconding delivery executives. These 6 months of on-ground operations coupled with the experience of large data management gave me an invaluable insight into the nuts and bolts of the food delivery business. With 6 months of on-ground operations experience under my belt, I volunteered to work with the central leadership team based out of Bangalore. I was assigned to work as an analyst to the General Manager for Vendor Management. This gave me the opportunity to get a more holistic bird's eye view of the entire countrywide operations. I could make significant contributions to a major cost cutting project focused on improving vendor KPIs across all the 8 cities in India. In the last 6 months I focused on developing dashboards for identifying problematic vendors, carried out feasibility studies on the impact of cutting down "low business, high ops issues" vendors and assisted in driving a quarter long change management exercise where I was directly reporting to the leadership team of the company. This gave me a firsthand experience of thought processes that go into managing a large startup like Swiggy. Successfully managing the competing interests of multiple stakeholders while being steadfastly focused on the core company goals has been the most important takeaway from this experience. To summarize, the experience of being a part of startup like Swiggy has been quite a fulfilling one. It has given me a great deal of insight into how sustainable companies are built brick by brick. Moreover, the very range of exposure; from CXOs to delivery boys has given me the ability to think from a macro to micro perspective which I believe which go a long way in the professional life ahead.

Company: Carwale (Automotive Exchange Pvt. Ltd.), Mumbai

S Tarun Reddy (2011B3A8395G)

My Internship at Carwale helped me majorly in learning how the mobile application technology works. I was part of Mobile Application Team at Carwale, working on iOS Carwale mobile application. This allowed me to learn various concepts in Mobile Application Development.A sufficient time was provided for me to learn various concepts and get ready to work on the live application. Over the time period I have worked on many important features and their integration into the application and was also part of 4 major releases. Also working in a team environment helped me to learn how to function and co-ordinate alongside other people. My project in simple was to implement the latest features provided by product manager, also make modifications and developments in the iOS Application technology according to the new updates. Over the time I have implemented Cocoapods, Filters, Favourites, Car Buying Assistance and Analytic trackers into the application. Working on these modules helped me in acquiring knowledge in UI/UX part of the module and also how the API integration is done in the application. The skill sets that are required to work on iOS Mobile Application Development are Objective-C/Swift, X-Code, Mac-OS X, Mobile App Development, GIT etc. I acquired these skills by starting with Objective-C and starting to develop small applications and Views in X-Code. Later I started to work on live application and also learnt how to work with GIT and co-ordinate on GIT along with others .Overall PS-II experience was good and it allowed me to learn something new and also expanded my knowledge and interest in iOS Technology. My major achievement is now I am able to work on the Carwale iOS live application and can implement new features with ease. Also with some more effort can work on a new application and build it from scratch. This ps-2 experience also helped me in my ability to learn and explore new things in Mobile technology and taught me how to improve my Concepts along with working on the application.

Ruturaj Zadbuke (2012A3PS223G)

My experience at Carwale was extremely rewarding. My learnings here have been threefold. First has to do with the code and software itself, the second was about challenge of managing the code and the third about the challenge of dealing with the human aspect of development. First, I learnt how android applications are actually developed in the real world and the challenges that a developer has to face in developing them. This was the most direct application of the computer science that I had learnt in courses like OOP in BITS. Later I started understanding the difference between getting things done and getting things right in software. I realized that what we do in course projects is the former but the real world development is about how well you can do the latter. The difference between the first and the second is that the first just ensures that you get the results, the second, however, also ensures that the code is easy to understand, maintain and scale up. The second thing, I learnt is that writing code is the easy part, but the harder part is explaining it in documentations. Explaining an abstract thought process in words takes both good writing skills and an ability to empathize with a maintainer who will read the documentation when you are long gone.The final thing I learnt was that it is easy to code if you are designing a software but a product is more than just a means to accomplish the goal, unlike a mere piece of software, a product has to be beautiful in the eyes of the designer who gives you blueprints and expects a delivery that agrees with those prints and it has to be lucrative in the eyes of the product manager who gives you the requirements that his sales team has contrived for him from the responses of the users and when these aspects enter coding, it is rarely an easy task to deliver a satisfactory product.My project here was to

develop an android app which would act like a lead management system as well as an inventory management system for an automobile dealer. This app is marketed by Carwale to dealers all over India and is available in the play store under the name autobiz. Towards the end of the PS, we even delivered a custom version of the app to a very reputable MNC car manufacturer. I personally had a huge contribution in this customized app. Overall, this Practice School has been a holistic learning experience that will aid me in my future ventures in the software industry.

Company: Centre For Development Of Imaging Technology, Trivandrum

Kailash R Pillai (2012A8PS362G)

With the rise of smartphones and their rapid replacement of traditional computers, today's websites need to be revamped to be adaptable to all devices and have cross-platform compatibility. Also, with most smartphones now possessing material design, most websites need a newer, sleeker look. In the web development projects assigned to us at C-DIT, the main task at hand was to redesign websites belonging to various departments of Govt of Kerala, viz. Department of Environment and Climate Change, State Institute of Rural Department, Kerala Livestock Development Board, Srinavasa Ramanujan Institute for Basic Sciences. Me and my fellow PS-2 students developed these websites to have an intuitive and easy to navigate interface and also provide cross-platform accessibility, thereby aiming to increase the public awareness and public participation in aforementioned initiatives undertaken by Govt. Departments in the respective domains. A popular and easy to learn web development and content management tool called Joomla Content Management System was used by me for my web development work. Joomla creates websites which are responsive to a device's screen size, as there are a plethora of templates to do so. Utilizing the basic features of Joomla, with the various templates and modules created and added externally, we were able to create cross platform compatible websites, sleek and secure to replace the increasingly obscure websites that are currently in place at these departments. I am grateful to my mentor at C-DIT for providing my the required assistance and guidance to accomplish the aforementioned projects, thereby gaining lot of technical skills in the process.

Abhishek Kumar Singh (2012A8PS192G)

In the beginning, I started with HTML, CSS and JavaScript for learning the basics of web technology. We were given projects under the web services department for the redesigning of Government Websites and bringing them to current design standards. I spent 1 month learning the basics of Web technology and Website designing. With the coming of mobile devices and screens of different aspect ratios, the old government websites were designed for old times and needed to be revamped to become adaptable to all devices. Also, following the current design standards of Flat design and Material designs that now most smartphones possess, I designed it to the latest standards. Along with my colleagues, I familiarized myself with Joomla, a content management system which is very helpful in creating websites that were more on the lines of latest design and being cross platform out of the box. During the rest of the 4.5 months, I started finding ways to optimize JS and CSS. After looking through loads of modules, plugins, frameworks that fit the template selected, I with along my PS 2 colleagues designed the ENVT (Kerala Government Environment Website of the Department of Environment and Climate change) website to be responsive.

I also made various plugins of which one was for the google maps, locating DOECC on the Map. Later in May, I started with my second individual project website of SRIBS (Srinivasa Ramanujan Institute for Basic Sciences). This was when I started creating my template using the stock template of Purity 3 template by JoomlaArt. I created Custom HTML modules for the News and announcements section of the website where the site admin can easily add the latest feeds. On this website, I added plugins for Social Sharing/liking/Comments which would enable the visitors of the website to share, like and comment on the events happening at SRIBS on social platforms. I also branded the SRIBS website with a new logo that matched the color scheme of my template. The new logo I made is a vector image that can be scaled to a very any resolution if need be. This will be a very important resource for the future developers. My work was well documented and sufficient information was provided along with the login credentials for the database and the website. The PS projects here was an eye opener for me, bringing me to the world of web technology that we all see every day but yet do not know the working behind it.

Spandan Konar (2012A8PS392G)

My Practice School 2 station, Thiruvananthapuram. During my 5.5 month work period, I, along with my PS 2 colleagues, worked with the web services department of the institute, and was responsible for redesigning the websites of 2 government department, on behalf of C-DIT. The first one was the website of the Department of Environment and Climate Change, Govt of Kerala; while the second was the website of the State Institute of Rural Development, Govt of Kerala. I was tasked with creating websites that were more futuristic, compliant with current design paradigms, and compatible with the wide array of devices that are coming up; while also giving these websites an elegant look. This task was accomplished by me using web development and content management tools known as Joomla Content Management System. Joomla was helpful in doing so as it creates websites that are responsive to a device's screen size, and does it very easily. Combining the basic features of Joomla, with the various templates and modules created and added externally, I was able to create crops platform compatible websites, sleek and secure to replace the slightly out-of-date websites that are currently in place at these departments.

Company: Cisco Systems (India) Pvt. Ltd., Bangalore

Anadi Rakesh Misra (2012A3PS141G)

Working at Cisco has been an amazing experience. Interning at a company which is a market leader in networking was a great learning expedition for me. I being a student of Electrical and Electronics was not much in coding and web development stuff. For me the main motive was to learn coding while working and that was the main reason I sought his company. With a thought in mind, "If not now, when?" My role name here was Software Engineer. As the name suggests I was the part of the engineering team among the many teams that are here are Cisco Systems, Inc. Under engineering section, I was allotted to the Core Software Group – Platform dependent team for Catalyst 6K switches of Cisco Systems, Inc. which are one the most sought after products of the company. When the work started in the month of February I was a little afraid as I didn't know coding at all and I was here at a company who is leading the world as far as networking and communications is concerned. But that fear was soon gone as the people here are very helpful. They were so good to be me, me being an intern that they used to leave what they were doing

and help me out for 2-3 hours at a stretch to teach me a basic concept of programming. I was allotted a mentor, a guide and a manager to whom I had to report. This system helped me a lot as there was always my mentor to whom I could ask anything whenever I got stuck. He was someone who was available to me outside work also. The best thing after the people here at Cisco Systems, Inc. is undoubtedly its work culture. With flexible work timings I could come at the office at my own leisure and need not be afraid. This also gave me the opportunity to stay back and work till night 8 pm and sometimes till 10 pm. The work-life balance is something which everyone here at Cisco Systems, Inc. appreciates. In between, once in a while, I went out to try my hand at basketball and volleyball. Even when the people here didn't know me (it is hard to know someone in a company which has 10000+ employees!) I was always welcomed. I worked on multiple small projects during my course of time here at Cisco Systems, Inc. During this endeavor I got a lot to learn not only from my mentor and manager but also excessive use of the internet. Yes, my friend, internet was the best guide to me in these five months. In January I did not know 'C' of coding. And today as I type this document I can claim that I am proficient in C and knowledgeable about php, css and html. I developed two web pages for my company which simplifies a complex process. I have written multiple codes which has helped reduce a six step process to a 4 step process. Finally, I would like to say that there is nothing that you can't learn. It will take time but if one is persistent enough anything can be learnt. I learned this here at Cisco Systems, Inc. A guy with no coding knowledge was able to do so much and contribute something substantial to the company. I would say that this journey has been truly wonderful and life changing.

Chandan Bothra (2012A3PS825H)

PS 2 has been an excellent learning curve. I was lucky to have been selected by a good manager. The work was interesting and I learnt a lot during the course of work. I was in Security Business Group which deals with Network Security. The security products deal with a lot of bugs and errors. The aim of my project was to optimize problem solving (errors/bugs) by determining the appropriate personnel and assigning it to them. Whenever a system encounters a bug/ error, there is a possibility of a developer having worked on it before. To optimize problem solving and decrease redundancy, it is better to redirect the bug/ error to the associated developer. If the bug/ error is fresh, we need to register it on a catalogue for future referencing and then direct it to appropriate department. I dealt extensively with Data Mining. R and Rapid Miner were some of the tools used extensively. MS-Excel came in handy too. R is an easy to learn tool. Rapid Miner has excellent interface which makes Data Analytics look easy. I must say PS-II has made me an expert in Data Analysis and I can forward to build on it. Further, knowledge of various Network Security Protocols and Products places me in an excellent position to bolster my career in Networks. My project received a Cisco Inspire Award for the amazing growth in predictive capability of my project tool. Cisco has been an amazing ride and hope it continues further too. My manager has been an excellent support, ever inspiring and a perfect role model. PS-II has helped me understand the nuances of corporate world. If I had to sum up my PS-II at Cisco in one line, it would be: Cisco is BITS Pilani of corporate world.

Hargun Singh Oberoi (2011B4A4090G)

I have had a marvelous experience here at CISCO with good projects, regular training and consistent mentoring by my managers. I must thank the PS division for this, as at times, I have felt that I was excused for my shortcomings because I was from BITS Pilani University. There are many interns from other top

colleges in India, who on many grounds were more prepared and industry ready than I was, with more certifications, training and overall understanding of the industry. However, I felt my takeaway was far richer than theirs; I was given better projects and treated with respect, which may not seem so important, but it gave me a very good feeling about going to office every day. I think as students of BITS, we often forget the privileges we receive, some of which were the evaluation components. Students from the other institute had to make frequent visits to their institutes for various evaluative components, and owing to no such constraints, I could wholly focus on my deliverables, which increased my productivity. With unhindered focus on my projects and work thanks to the PS division, I had an overwhelmingly positive experience with the organization. Cisco is a global company, and with several cross-functional teams. It is a perfect blend of management and technical and thus gives several opportunities to learn various skill-sets. Overall, I think this was a perfect addition to my educational arsenal, I now feel ready for the industry. Projects as mentioned earlier were same as which would be given to any regular employee in my Business Unit. I was trained for specific CISCO technologies and I am glad for it since it showed me the real life applications of many seemingly abstract concepts taught in the classroom. I am grateful to partake this internship opportunity and feel really lucky to be from BITS Pilani University; else I am sure I would not have such an opportunity. The Project was mainly focused on ensuring the cross-functional translation of deliverables across various teams. In big organizations, it becomes extremely difficult to track the list of requirement specifications as each deliverable goes from top-level requirement to bottom-level execution. For example, stakeholders may require a particular specification, which may be translated into a Business Review Document. These specifications then go to the Software team which make an appropriate Software Requirement Specifications document to ensure the stakeholders' expectations are met. This transition is often blurry, and the software team ends up delivering only a few of the requirements specified owing to various factors. Some of these requirements, which are not met, can lead to an incomplete delivery thereby sending the project in a second iteration. Such processes can be extremely costly as resources are wasted in each, repeated iteration. Thereby, a cross-functional team that ensures the right specifications are captured and delivered can save a lot of time, money and resources. Our job was to ensure the above process and this gave us a good understanding of each functional team. What are the skill sets that were required in implementing the project? How did you acquire the skill sets? Technical Skills: MS Projects/Excel/PowerPoint, Basic SQL query, Java/J2EE basic knowledge. Soft Skills: Communication Skills, Making decisions, Team-Working Skills, Leadership skills. I had several takeaways from this internship some of which are mentioned: Solid understanding of Project life cycle, Working knowledge of popular industry level software tools like R, HADOOP, MS Projects, Understanding of Business terms and protocols. I was selected for the Cisco Global Mentorship program and mentored by top leaders from around the globe. Selected as the SPOC and Team Lead for all interns in my Business Unit.Received exemplary feedback for organizing some team-building events.

Pankaj Kumar Saini (2014H149294P)
My six month experience at Cisco has been like an unexpected journey. As the work in Cisco was described to be different from what my primary choice of courses in finance, I decided to choose this station for my PS for learning about different areas of business other than marketing, Finance and HR. I was made a part of GDC team, which primary takes care of providing support to other business units. Under the able guidance of my mentors and colleagues I learned basics of how to approach a business problem provided by our sales counterparts. They just gave us the problem and asked us to figure out the needed solution

and provide a finalized solution by the deadline. Each project I worked on was a different working experience and my mentors, though very much senior to me in this field were open to take up my suggestion. Overall Cisco offered me the learning experience I was looking for in my PS along with an awesome working environment. Cisco as a company focuses on offering its employees a very flexible working environment with options of flexible working hours and work from home options. Working over here was fun along with work deadlines we had to adhere to.

Aarthi J (2014H103018H)

I worked in Core Software Group – Switching Access Platform Team as a Software Engineer Intern. During the internship tenure of 5.5 months, I did multiple projects. I will explain in detail about each project. Sahakaar – This tool is used by the Cisco employees (both managers and engineers) to keep track of the work done like bugs they resolved, service requests they are handling, new features and enhancements etc. This tool pulls data from many Cisco tools and gives all the data in a single place so that the management becomes easier. This tool will help managers a lot to assess the performance of the engineers under them. Tech Stack Used: HTML, CSS, BOOTSTRAP, JQUERY, Java Script, PHP, LDAP etc. Product Life Cycle Management – This project is done as a part of ENG Hackathon which automates the network management. And this project won the first prize in the Hackathon and further process of applying for tech fund is going on. Discovery Protocol for the upcoming Switch: To Discover the newly connected device in the network for the newly developing Cisco Switch. For this project, I had to learn Cisco IOS Programming and my managers and mentors helped me a lot in learning this. IOT Protocol Bridge: A plugin was developed to convert MQTT packets to CoAP Packets and vice versa. This project helped me to learn about Internet of Things a lot. Regarding the organization culture and environment, I would recommend it as an option where there is sample amount of flexibility and work life being balanced. The entire Team has been very supportive in terms of guiding me towards accomplishing the task being assigned. They guided me well by personally explaining all the fundamentals & helped me wherever I got stuck. Apart from technical learning, I also got to interact with Director and senior managers who gave me career advice which will definitely be helpful in my long term career. This 5 and half months of PS at Cisco Systems has given me the much required smooth transition from college to industry. Coming down to conclude, I would recommend this PS for the students who wish to explore their carrier in the field of networking, testing and software development.

Iti Sri (2014H103021G)

I worked in Core Software Group – Operation team as a Software Engineer Intern. During the internship tenure of 5.5 months, my work included creating a new tool (SLIM) for lab resource management and developing a frontend for the same. This tool is developed to manage equipment resources in Cisco Engineering Labs, monitor their utilization and generate appropriate reports for necessary actions. This project aims at finding dynamic inventory of the lab and finding the utilization measurements for Lab Gears. The dynamic inventory is used for Data Driven Lab Analytics. It can be extended to adding on more features depending on type of data analytics. A frontend for interactive user experience is provided through customizable user profiles and dashboards for data analysis, report generations and extrapolation. I have learnt a lot throughout this project. Interconnecting of devices, configuration, automation are a few to list. Getting exposure to Cisco Lab was one of the greatest opportunity. This

project helped me to learn networking, software development and also testing. Backend implementation required working with python, mongoDB and pymongo libraries. Frontend implementation uses HTML5, CSS, bootstrap and JavaScript. Regarding the organization culture and environment, I would recommend it as an option where there is sample amount of flexibility and work life being balanced. The entire Team has been very supportive in terms of guiding me towards accomplishing the task being assigned. They guided me well by personally explaining all the fundamentals & helped me wherever I got stuck. Apart from technical learning, I also got to interact with Director and senior managers who gave me career advice which will definitely be helpful in my long term career. This 5 and half months of PS at Cisco Systems has given me the much required smooth transition from college to industry. Coming down to conclude, I would recommend this PS for the students who wish to explore their carrier in the field of networking, testing and software development.

Piyush Dixit (2013H313088H)

I worked in Core Software Group – Security team as a Software Engineer Intern. During the internship tenure of 5.5 months, my work included adding a new functionality to Cisco product, developing a web interface and server base to interact with that product and some bug fixing. GETVPN is a cisco proprietary VPN, it provides a secure communication between a group of users using a symmetric key encryption. It used IPv4 version of IP address to communicate among group members and key servers and also among Key servers. Now with reducing number of IPv4 address there has been a transition to use of IPv6 address. My work was to make Key servers able to handle communication both on IPv4 and Ipv6. To complete this part I have to go through details of GETVPN and IPv6 version of IP address. My next project was to develop a web interface and server side to interact with GETVPN using a Graphical user interface thus avoiding use of command line interface. It's implementation required working with Java Servlet, html and JavaScript. While working on these tasks, I got help from my team. They guided me well by personally explaining all the product fundamentals & helped me wherever I got stuck. Apart from technical learning, I also got to interact with Director and senior managers who gave me career advice which will definitely be helpful in my long term career. This 5 and half months of PS at Cisco Systems has given me the much required smooth transition from college to industry.

Rohit Chaware (2014H1030103P)

I worked in Prime Infrastructure – Inventory team as a Software Engineer Intern. During the internship tenure of 5.5 months, I worked to develop standalone utilities which are currently being used by developers and Prime Infrastructure customers. The utilities developed include utility for identification of all post collection hooks which run after a device is added to Prime Infrastructure, utility for identification of object hierarchy involved in delete device operation and a utility to find out all the commands sent to a device. These utilities are based on Java regex, Java reflection and Spring Aspect Oriented Programming frameworks. Also, I got to work on a Proof of Concept in Distributed Caching using ehcache, terracotta and Redis. While working on these tasks, I got help from my mentor who happened to be a BITS Pilani graduate. He guided me well by personally explaining all the product fundamentals & helped me in choosing the frameworks for completing the tasks. Apart from technical learning, I also got to interact

with Director and senior managers who gave me career advice which will definitely be helpful in my long term career. During my internship, I got selected for Cisco Global Mentorship Program & got the opportunity to be mentored by a Technical Leader from San Jose. She helped me in understanding how to go ahead to become a Subject Matter Expert in Cisco through getting involved in projects and interacting with existing Cisco's think tank. This 5 and half months of PS at Cisco Systems has given me the much required smooth transition from college to industry.

Sonia Kaushik (2014H149245P)

In many ways, an internship is like an independent study. Because the experience takes place outside of the classroom, I as a student have the opportunity to take charge of my learning by developing my own goals and assessing my progress along the way. I put significant time and energy into this internship and find that they have a more meaningful and beneficial experience. My internship at CISCO has been a wonderful experience and I would recommend doing an internship with CISCO to anyone interested in getting some real world experience. I was able to fulfill all the objectives that one can think of during an internship: academic, professional as well as personal, which is truly a rewarding experience. The internship allowed me to further explore and implement the concepts I've learned in my classroom, thus fulfilling my Academic learning objectives. It helped me to develop as a professional and developing a better sense of the particular field in which I was interning which helped me in completing my Professional learning objectives.It helped me to develop skills for personal growth and enrichment and thus fulfilling my Personal Learning objectivesfrom this internship. During my internship I worked on three projects namely: Prototype for Web Based Version of PET, TCO/ROI TOOL for collaboration team, Benchmarking for Presales Enablement Tool. I was required to have skillsets like MS Excel Advanced Knowledge, know-how of design thinking, Crisp DM Methodology, Data Mining, Data Analytics, Data Science, Visual Basic, .NET, financial proficiency etc. Some of these I had already acquired during my MBA and some I acquired while working in CISCO. I learned about Design Thinking, CRISP DM Methodology, and the R Statistical tool while working on the above mentioned projects. My team members continuously helped me in acquiring the skills required for project completion. Surviving in the working world involves more than just book knowledge and an intimate understanding of word processors. Lessons in life also involve social skills, including teamwork, conversing with co-workers, and knowing when to stay quiet and when to speak up. This Internship gave me a head start in learning day-to-day social skills on the job like: Innovation: The difficulties and roadblocks faced while innovating and how to overcome these. New Process Implementation:Change is difficult and cumbersome to implement; a well-planned, structured process is required to implement anything new. Networking:Learning about people, how to interact with them and to be confident while asking for help. Academics in Real Life: How academic knowledge is implemented in real life scenario and how our academics are important in building our confidence and knowledge base. My time at CISCO definitely follows the motto of "work hard, play hard". There was time which was very stressful as I was working on two projects at the same time, but there were so many opportunities to relax and have fun like Women's Day Celebration, Motivational speakers at various events, Jamboree Event, and Fun Fiesta recently organized by our Advanced Services Director, Ms. Lavanya. These fun and relaxing opportunities had made my internship experience even better. During this internship, everyone involved in the team accepted me as an equal during all phases of the project and valued my opinion. This acceptance allowed me to explore my potential and incorporate new learnings for the betterment of my career.

Ashwin Jacob Thomas (2014H149247P)

To be part of #1 IT Company of the world and one which owns end-to-end of its supply chain is an experience of lifetime. My past 5 months has been a roller-coaster exploring the huge vertical of Cisco Advanced Service Business Unit. The word on the street is innovation and everyone wants to see that happen here in Cisco. Right from start, We were put into top gear on innovation front and asked to see the AS tools and processes differently. The first two months were into a passive shadowing of the team's workings and how they do business especially the SVT team under Viva. Cisco had on offer three roles for BITS PS-2 interns- Business Ops, Business Development & Analytics Roles. I was put into the pre-sales work which would mean pricing, scoping, preparing an official quote for the Sales team in the US. The task upfront on this domain was to re-imagine Pre- sales enablement tool and make the BDM's life easier. As days passed by, benchmarking came our way where we had to benchmark past booked Cisco deals to help predict the level of effort and pricing for future incoming deals. Achieving this would mean massive data extraction and inferring association from each of these transactions. As I am writing this- I got re-assigned to a consulting project in Analytics for a client to analyze their network syslog messages and help predict the router break-downs. Doing that would mean mining association rules into millions of syslog messages and creating a model which would predict the cause of the failure. Today's business decisions are made on information and Cisco helped me understand how raw data can be transformed into information for consulting and sales decisions. Skill set required- mathematical models on data mining, software skills- R , Python , vba. My takeaway from the PS2 experience how the companies are changing in this age of data mining. Data interpretation is word on the street and my achievement is in adapting myself from my business background to a technical one where I had nothing as capital except for my learning appetite.

Swati Chopra (2014H149285P)

Being a Finance student, I opted Cisco for gaining the cross-functional experience & sense of business in an IT sector before joining Financial Services. The 5 months period of PS-2 was a period of great learning. I had been lucky to be part of two teams and to work under two managers. This has helped me not only to broaden my technical skills, but also inter-personal skills. The exposure at Cisco was great. One can freely meet Directors & Heads of various business units & gain career insights from them. The project I was working on Data Analytics. It involved analyzing whether GDC, business org of Cisco, lead to higher margins. The analysis was done & the findings were presented to Susan, Director of Strategy & Operations. Initially, it was not easy to be able to read numbers, make business sense out of it and present it as a business case. It requires good knowledge of business and years of experience. Luckily, I have had great peers who helped me in this project. The skills required were: Business acumen, Good knowledge of Statistics, MS Excel, R, Presentation skills. I learnt these skills from internet, under the guidance of my team mate. I learnt to apply the Statistics learned in college to present a business case. The findings of my project were presented to Susan, Director of Strategy & Operations. Also, I had a chance to represent Cisco at 5C's marathon in 5km category. This was really a motivator for an intern!

Rishabh Choudhary (2012A3PS156P)

The aim of my project was to upgrade the control plane stack of the GETVPN (Group Encrypted Transport Virtual Private Network) to Dual stack (IPv4/v6). This requires enhancing the communication between key servers and group members to operate on both IPv4 as well as IPv6 protocol. Successful implementation of the project required thorough understanding of data structures and algorithms, and a complete grasp over C language. The entire infrastructural code of GETVPN network is developed in C language. Using the VMWare resources and working on Linux environment required complete conceptual understanding of operating systems and working knowledge of shell commands. The project also required underlying knowledge of data communication and networks, Routing protocols, network security and cryptography. Conceptual understanding of timers and packet formation and processing was essential to the development of the project. The generic skill set of data structures and algorithms, C language, operating systems and networks was acquired through courses I had completed in college as part of my curriculum. The application specific knowledge pertaining to the entire GETVPN network was provided by the organization at the beginning of the project in the form of documentation and recorded meetings. PS-II provided the much needed exposure and experience required to build an escalating head start for one's professional career. It works as a catalyst to make the transition from college to corporate world smooth and obstacle free. The PS experience gives a hands on exposure to demands and expectations of the corporate world. It helps you apply the knowledge gained at college at the industrial level and understand the gap between academic and professional world. My PS-II experience helped me gain a lot in terms of technical expertise, leadership skills, team building abilities, presentation and communication skills, punctuality, persistence, professional ethics, and a better personality which can face the real world and solve the challenges of the society.

Sagar Srivastav (2012A3PS159)

Cisco systems needs no introduction to any who calls himself a software engineer. It is one of the giants in tech and drives the innovation in the networking industry. Cisco's market cap is bigger than all of its competitor's combined. Cisco's bread and butter is switching and routing solutions but it has its fingers in all the cookie jars there are. My project, 'In-Band OAM for IPv6 (IOAM6)', is a tech-fund project, (a project proposed by a cisco employee that is funded by the company) that seeks to verify that a data packet has visited all the nodes that are there in a service chain. Earlier service function nodes were simply cabled together and there was no way for a packet to bypass a node. However with the advent of Network Function Virtualization, there are no cables and hence there is a possibility packet re-routing by a malicious user that bypasses a service node. Our project mitigates that. The project has been open-sourced. Learning experience in Cisco has been absolutely great. You are surrounded by people with many years of experience and wisdom under their belt who readily mentor, inspire and guide you. There is no undue pressure from the management. I am treated no differently than a regular employee and am given work of significant importance to the project. Knowledge of networking systems is paramount for the work at Cisco. It is advisable for student to go through basic networking concepts before joining. Working environment is also top notch. Cisco's Bangalore campus is the second largest Cisco campus there is after Cisco headquarters at San Jose, USA. You have really awesome spaces with TT tables, pool tables, air hockey, foosball, arcades, massage chairs, gym, indoor gardens, even an indoor theater in the premises.

Overall PS-2 has been a very engaging and fruitful experience. It truly gives students a clear picture of the work at industry. It is extremely valuable and one of the best experiences of college life. I would highly recommend students to opt for Cisco systems as their choice for PS-2.

Shubham Panchadhar (2012AAPS115H)

PS 2 has been a good learning curve. I was lucky to have a good mentor to help me. The work was good and I learnt new stuff during the course of work. I was in Optical Group which deals with deployment of optical networks. My project was to develop a Site View Layout of the different optical cards being used in the building of optical networks and showing the various interconnections between them. I got to learn about different optical components and also code in Java. PS-II has helped me understand the nuances of corporate world.

Togis Thomas (2014H124073P)

I have been working with Fretta team, which is coming under CSG(Core Software Group) during my internship. Our aim is to automate workflow/feature verification from traces or logs using supervised learning and classification. When developers code up a feature, there is a set of logs associated with that feature. The set of logs here is like a fingerprint of how the feature is behaving- was it successful or failure and if so why and where. Today debugging is done manually and it consumes lot of bandwidth and also time and complexity grows exponentially when multiple components get involved in the picture. We build up a framework which can learn pattern provided by subject matter expert, which is the supervised learning and internally construct a decision tree and produces a result. The other interesting which we are doing now is automation of router debugging by using Yang data model. YANG is a data modelling language used by Network Configuration Protocol (NETCONF) Automation using yang data model is a research topic and we are very much excited to work on this. The basic skill set required for this project is good knowledge of a programming language(we used python), json, html language, Linux commands, web server, machine learning algorithms, data analytics and basic knowledge of networks. The way in which I acquired my skill is with the help of google and interaction with my mentor and teammates. Since I was from electronics background initially I was unware about the machine learning and data analytics by doing this project got opportunity to learn about this interesting topics and able build up a framework using python in this short period. Helps some teams in debugging there logs using our framework and log analysis tools such as Graylog and ELK. During this internship period we got opportunity to interact with network architects in Dublin and San Jose. Cisco gave us full access to Fretta router in San Jose and now we are working on it. Took part in SPNG Hackathon in our department and got inspire 3 award from our manager for special mention about our project. Cisco helps me to have transition from my student's life to professional life which every fresher desire. The work culture in cisco is really good and Cisco is treating there interns same as their employees.

Company: DELL R&D, Bangalore

Ambresh Gupta (2014H112194P)

My internship journey at Dell R&D, Bangalore, Indiawas great and this is what we all should expect out of any PS station. Dell R&D for learning prospective, it was not just confined to academics and understanding corporate world, it also involved the grooming of my own personality towards professionalism and good ethics. Many people I met here had a very keen intellect. They were very humble and easy to approach irrespective of the positions they held. In Dell R&D, I worked with System Management Team. At first day in office, I completed my joining formality and met with my mentor. He give a brief synopsis of my project. This is an open-ended analytics project where I explore my advance analytics knowledge. My task was to create proof of concept for this project. The aspect of my project is to convert the log data of server into intelligence in real time. Analyze the server log files and extracting the top events in each server of datacenter and observing how the events themselves change over the longer period of time, computing a degree of rapidness of changes in events of datacenter. Cluster of related events which may refer to one customer activity and system operation, similarity between events is based on its trend and also establish the relationship between events when they occurring together. To complete this project you should have a good knowledge of machine learning technique and at least one analytics programing language. At first I relied on excessive googling and the tasks assigned to me are just required online learning and come up with one algorithm to find the top events in datacenter. I also learnt how to report to my mentor with deadlines in mind, how to adhere to deadlines and what one must do if one is unable to deliver before the deadlines. I again realized how important it was to interact with the right people at the required time, to enhance the workflow and improve the progress towards the assigned task well before deadlines. After each subtask, I had a presentation with my mentor and other technologist of Dell. And here I learnt how to present project in business prospective and enhance my presentation skill. To conclude, I would like to recommend this place as an option for all students who have software knowledge and want to experience working somewhere you will feel independent and important. These aspects of learning are difficult to obtain in the colleges, hence I am thankful for choosing PS over thesis. Our sincere thanks to PS division for this opportunity.

Vivek Veerabahu Subramanian (2013H313079H)

My internship journey at Dell R&D is a big learning experience. It was not just confined to academics and understanding corporate world, it also involved the grooming of my own personality towards gathering professionalism and good ethics. Many people I met here have a very keen intellect. They could grasp my problems in no time, explain concepts to me by coming down to my level. They were very humble and easy to approach irrespective of the stalwart positions they held. At first I relied on excessive googling and often thought the tasks assigned to me just required online learning, seldom did I realize that I had to deal with many internal documentations that are not available online. Then I had to move about and visit people to get the required documentation. I had to ask the appropriate person the relevant documentation, doubts etc. This opened me up and brought an end to my shy nature. I also learnt how to report to my mentor with deadlines in mind, how to adhere to deadlines and what one must do if one is unable to deliver before the deadlines. I again realized how important it was to interact with the right people at the required time, to enhance the workflow and improve the progress towards the assigned task well before deadlines. For instance I could have saved valuable time by reporting that I could not compile my own written providers in my environment instead of debugging the environment (which I did for many days). While I asked for help, another senior pointed out that my environment is buggy and I must consider getting a new environment. My mentors assigned at Dell were very encouraging and guided

me meticulously. I was motivated to continue the hard work due to their managerial skills, even at times when I was struggling to deliver the required tasks. I was very fortunate to also work on my friend's data science project apart from my own provider development project on finding VM information. My friend and his mentor used to conduct open discussions were I usually sit for work. I was attracted to by their flow of thoughts and followed their conversations and their project ideas. A point came about where their discussion turned to statistical distributions etc – which are my interests too. I started along with their conversation sharing my ideas on distribution fitting, goodness of fit chi-square tests and Survival Analysis for failure data. As they encouraged me, I could contribute important statistical analysis for their failure data in R- the statistical programming language. My friends mentor lauded me for my contribution and is further working with me with his data sets. My friends mentor also guided me with his insights towards my own project implementation. As I intend to follow up a data science career in the near future, this was a truly fulfilling experience to me. Lastly the most delightful part is that the provider that I am writing will be bundled into a package available as a part of an upcoming release. Further any provider for VMWare's ESXi OS can be certified by VMWare and it is a matter of pride for the provider developer. I will be applying for certification once I complete the provider to find essential VM information. These aspects of learning are difficult to obtain in the academia/schools/colleges, hence I am indeed grateful to BITS Pilani for the PS2 experience.

Vaibhav Padhye (2014h103085P)

My PS 2 station is Dell R&D, Bangalore. My experience there has been one of the most diverse both from the learning point of view and from gaining an insight of the industrial experience. Working in an R&D organization of Dell gave me ample amount of time to nurture my work ethics and at the same time offering enough flexibility to tackle the problem with innovative approach. Also working with the mentors who have been in industry for more than 10-15 years also was an important experience in itself and taught the importance of working in a team. Our mentors in the beginning itself taught us the importance of the respective projects and signaled a sense of trust in us which rather made us more responsible and sincere towards our project. We were also encouraged to communicate freely to our mentor anytime without inhibition if we were facing any difficulties. As soon as we arrived, we were given the choice to choose our project according to one's own interest. I took the project related to simulation of Idrac operations as it look exciting and having various layers of implementation. The technical part of the project included web services and Java, Python as the programming languages. Apart from this throughout the project we also discovered the current trends and technologies relative to the field. The other important concepts I learned from this project included multithreading, Java RMI, client server paradigm etc. Apart from the technical aspects, getting an insight of the real world experience was another major advantage. Although the experience was not completely a smooth ride as there were times when I was stuck in some parts related to the projects. However the support and motivation provided to us by the mentor was rather a much needed boost to overcome such difficulties which in turn prepared me for tackling odd situations. Apart from it seeing the work environment in Dell also helped in gaining insight of the professional ethics of the corporate world. I would like to conclude by saying that I would like to thank PS2 division for providing such a unique program to students where they can both learn and grow their personality simultaneously. Apart from this I would also like to thank my mentor Mr. Rveendra Madala in Dell for constantly motivating us and PS assigned faculty Mr. Nayan Khare for being approachable for any queries regarding the college course to be followed apart from the onsite project.

Company: DreamWorks Animation, Bangalore

A.S.Gomathi (2011B2A7622H)

As an intern, I would consider myself very fortunate to have this opportunity to work at one of the biggest animation studios in the world. Thanks to the tremendous efforts of my mentors and supervisors I was able to develop many aspects of my understanding of professional life in terms of both technical and soft skills. The activities that helped me gain more confidence and motivation for work are: Participation in regular weekly meetings, Conducting presentation and demonstrations for the tools and plugins developed, Improving my problem solving speed by learning the correct approach techniques, Developing friendly and fruitful relationships with my colleagues and mentors, Expressing my ideas and taking up responsibilities when needed, Contributing new ideas to my mentors, Never hesitating to ask a question no matter how silly it seemed, Improved my programming and problem solving skills drastically, Developed a clear understanding of the software life cycle in terms of maintenance and incremental version upgrades. The project I was working on involved elastic search, logstash and kibana. Learning three completely new pieces of technology was a daunting task but under the guidance of my mentor Jaskirat Singh, I was able to complete my project successfully. The few prerequisites to working in Dreamworks is a thorough knowledge of data structures and algorithms and an understanding of how to work with object oriented programming languages. A basic knowledge of computer graphics is also mandatory. I believe that my term here at DreamWorks Animation, Bangalore has been a wonderful experience and was a huge success for me as it not only opened up a whole new world of talent in Computer Graphics but also allowed me to interact with different parts of the production pipeline that helped me have a better understanding of the animation industry. This internship has provided me the confidence and ability to learn entirely new technologies in short span of time such as the numerous studio specific technologies. The exposure has been one of the key factors in my overall career growth. To conclude, I would like to recommend this place for all Computer Science students who want to experience working in the Animation Industry and understand the intricacies involved in the process of film making. The team is extremely friendly and very supportive. The perks that we get, including the regular movie nights, team outings, good breakfast, etc is an additional bonus. The environment is very conducive to learning. Each intern is given individual projects to work on which leads to a feeling of responsibility. Overall, working at Dreamworks Animation has been an amazing experience. My sincere thanks to PS division and to Dreamworks for giving me this opportunity.

Jibin Parayil Thomas (2011B4A7628G)

It was a great experience to work as technical director in a world famous company such as Dreamworks Animation. Major learnings during this awesome time was improvement in technical skills, better knowledge of animation industry and skills to work as a part of a big team. Initial couple of months, we had training to get familiarized with the studio pipeline as we don't have much exposure to animation field during our college. Training includes basic flow of assets through different departments such as art, modelling, layout, animation, character effects, FX, lighting, matte painting etc. revision control system used in the studio, studio standards while coding, basic walkthrough of Dreamworks proprietary softwares such as PREMO(animation) and TORCH(Lighting), basic python and few classes of studio python libraries. Usually technical director supports one of the departments (ex: layout, animation, etc) whereas I was initially assigned the role of pipeline development. Most of the codes in the studio is written in python.

Therefore, I had to learn python to begin with pipeline development. Initially, I was assigned a minor task of integrating sync status between DDU (Dreamworks India) and GLD (Dreamworks USA) in one of the existing tools. It helped me in getting familiarized with python as well as helped me to learn how to work with long codes written by others. My next task was to create a PyQt GUI that would take care of necessary transfer between the studios. This assignment helped me in learning more about the pipeline as well as helped me to learn PyQt. This assignment was followed by a task to add certain features to an existing web app. I had never worked with web apps before this and therefore this also was a good opportunity to learn web development. Therefore, for all the tasks mentioned above I had to learn something new. Each and everyone in the TD team is so enthusiastic to help but at the same time they don't spoon feed us rather provide us with the right directions. Later, based on my request, I was assigned to animation department to support them as a technical director. It has helped me to understand the animation pipeline better and at the same time it gave me immense pleasure to work with such talented artists. Working as part of such a big department has helped me to improve my soft skills to a great extent. To conclude, I would recommend this PS station to students who are deeply interested in animation industry as well as have the interest to learn new stuff based on requirements.

Kapil Earanky (2012A7PS045P)

The six months I spent at DreamWorks Animation was like a joy ride, I just didn't realize how time passed so quickly! Being my first internship in the industry, I was quite nervous initially about the "corporate" world and how I would fit in. DreamWorks was just like an extension to BITS, setting aside the fact that the place is full of BITSians, the work culture here too is quite a lot like BITS, fun and chilled out but at the same time rewarding in terms of knowledge and exposure. I was part of the Research & Development team here in DDU. My project involved the development of a Spring-boot based web application using NoSQL databases to store and search for schema-less JSON data. The application was targeted for use in the studio internally to store and search across metadata generated by the various in-house studio softwares. The first week was spent in training us about the tools used in the studio and other technologies specific to DreamWorks. Later, my mentor very patiently took me through the basics of all the technologies required for the project. Also, whenever I got stuck at any point she would always help me out, encouraging me to think for a solution myself. A large chunk of my project involved researching NoSQL databases for picking the right fit for the project. The Database Systems course I studied at BITS was really helpful here; watching the practical applications of what I studied in theory was an enriching experience. Also, the object oriented programming course was a good background to the mechanism of writing code in the industry. I have learned a lot through the duration of the course both in terms of technical knowledge and other valuable soft skills. I gained an insight into all the phases a software tool goes though in an organization, right from the ideation phase to the deployment. I developed an understanding of good coding practices to ensure reusability and readability of code in a collaborative environment. I also had the opportunity to develop my personality by interacting with various people across the organization. Another important takeaway for me was the insight I gained into the process of making an animated movie. Being a complete outsider to the industry, I believe I have now gained a good understanding of all the nitty-gritties involved in the process of movie making. In conclusion, my time at DreamWorks was memorable and enriching.

R. Sai Aparna (2012C6PS695H)

I worked as a Technical Director (TD) intern and my role involved technical support for the Image Finaling (compositing) department and general software development to improve the graphics pipeline at the studio. Skills you need to function as a TD are a good grasp of any programming language (Python is the commonly used language for TD tool development) and some understanding of software development. Knowledge about any 3D/compositing software (Maya, Houdini, Nuke, Photoshop etc.) would be very useful as well (not a requirement). The knowledge I gained during the course of PS II would be: Overview of the studio pipeline, Familiarity with Photoshop and Nuke, Good programming practices, writing maintainable code, documentation, How to read code, get to the relevant details and integrate code with existing tools, Time management and prioritising development vs. support tasks.

Srishti Dhamija (2012A7PS084P)

As a Technical Director intern DreamWorks Animation India, my work was centered on pipeline development and support for upcoming movies. I was responsible for a varied set of tasks including improvement of workflows in movie making, laying down best practices, proactive resolution of technical issues in the studio pipeline, bug fixes and development of tools so that artists can work effectively. The skills required to carry out these tasks include an understanding of the studio animation pipeline and relevant computer graphics concepts, familiarity with Python and shell scripting, and the ability to effectively prioritize issues. Interaction with people at the studio, problem solving in a live production environment and self-directed learning helped me acquire these skills. As a fresher in the industry, interacting with people at the studio was a terrific learning experience. Working with technical people and artists at the studio has expanded my knowledge of both the technical aspects of a production pipeline and artist workflows in the VFX/animation industry, and it was inspiring to see everybody share passion for their work. My mentors and colleagues were always patient and willing to educate me on unfamiliar (or familiar) subjects, and during my internship I have learnt more about everything from good programming practices to big ideas for integrating new technologies into the studio workflows. Ongoing projects in the studio also exposed me to industry relevant applications of concepts from a wide range of domains including core graphics development, web services and user experience design. In summary, an internship at DreamWorks Animation gave me an excellent opportunity to explore the VFX/animation industry. It has helped me define my goals for the future, and the holistic combination of technical skills and soft skills that I have acquired here will help me work towards those goals.

Company: EMC, Bangalore

G. Rishikesh (2011B4A7515H)

I had my internship in EMC from Jan 2016 to June 2016. It was a wonderful experience as we got to work on some of the latest technologies that are being used in the world. In the beginning we were required to understand the softwares like mesos, docker etc. that were being used the project. That initially took a little while. Then we were given our main project, which was based on kafka, which is a messaging app which can send messages with a very high throughput. This is extensively used by companies like linked in. We were required to understand how it worked on the most basic level so that we could maximize the

throughput on the EMC network. The entire team was experienced and extremely helpful, then were always ready to help us whenever we needed it. And also a lot of freedom was given to us so that we could explore Kafka completely and proceed in which direction we wanted to. Overall it was a great experience to work in EMC. Manager Review: Rishikesh worked on kafka performance analysis project during his internship at EMC. He diligently worked on the project and completed all the tasks assigned to him. Moreover, he was proactive in getting his queries and doubts resolved from senior team members.

Amritha Jayadev (2011B4A7636H)

I have done an internship in EMC2 Bangalore which spanned over a period of 11 months (July-2015 to June-2016). I was lucky enough to be a part of a very successful product team ViPR SRM, where I was able to contribute in a couple of projects. This internship has enabled me to get a better insight of my career path because it gave me the opportunity to work in different areas of project. In the first phase of internship, I was given the task of developing two POCs. The POCs proved to be helpful in reporting and monitoring the Regression and Performance & Scale tests. This was a project with developmental nature, whereas in the second phase of the internship, my task was to do ad-hoc and functional testing of a part of the product. I believe that I was able to do a fair job during the course of internship. Apart from the technical knowledge gained, some of the greatest learnings were how to be a team player and the knowledge of corporate culture. I'm grateful to all my mentors for their guidance, without which my internship wouldn't have been fruitful. I'm sure that this experience will help me go long way in my career. Thanks to PSD and EMC Corporation for giving me a very valuable Practice School II. Maria Antony, Arockia Antony Rajesh Associate Principal Software Engineer, EMC Bangalore: Amritha has been part of our team for a period of 6 months and it is been such a great feel that she has never let us feel that she is an intern. We are working in Agile Practice Methodologies and there will be many incremental deliveries with continuous releases for every 6 months. Due to that there will be minimal time for new comers to get spike on the development. From our side, we expect the team member who onboard to be self-learning, putting quality of works, nearly individual contributor role without having much dependency with other team member for their work. She excelled in all above expectations along with being an excellent team player. Whenever we have planning of upcoming works, we really got excellent ideas/thoughts from her, which helped us in granulating the work and fine graining the use cases. Being long running and large customer base product, we not only look for technical strength from the new comers, but also ability to work dynamically in different areas of the product and strong domain knowledge. Based on that she really outperformed in all the technical areas which is used in the product. We can proudly say she is a perfect value addition to the team. Overall, we felt the great quality of engineers produced by BITS and that tells the brand value BITS is holding.

Adtiya Duggal (2012A7PS006H)

Project: Automated Bulk-Discovery of ViPR Devices - For this project my mentor, H. Ramya, has been extremely helpful. Any little doubt that I had, was instantly clarified by her. She had such a thorough grasp on the ViPR client code, that it took her only minutes to find whatever I came looking for in the code. The canteen here is perfect for those late night debugging sessions in the office. Also, the overall ViPR Dev team has been really helpful and has created a very positive work environment. All of my team members have been in EMC for 8-10 years, and it is evident why. Recently, the project I had worked on was

demonstrated to the Vice President of the organization, Mr. Vikram Bhambri, and it elicited very positive feedback. It feels really good to see your hard work of many months, being validated like this. A big thanks to my manager, Mr. Mallari Kulkarni, for giving me this project and helping me finish it with flair. Mentor's feedback: Aditya is a quick learner and grasps things quickly. With minimal guidance from my end, he could complete the given task ahead of deadline stipulated. Apart from being functional, he has good interaction skills across the teams which are of key importance in any field for success. It was great experience with him overall.

Anuj (2014H103095P)

Project Title- Providing support of VNX Unity in VIpr: For this project my mentor Pooja kumar is extremely helpful. All my doubts are cleared by her up to the full extend. She guided me very well throughout my whole internship and I had learnt a lot from her. The overall Vipr Dev team has been really helpful and has created a very positive work environment. EMC is famous for its storage arrays and I got the opportunity to work with one of a new storage array recently launch by EMC i.e. VNX Unity. The whole journey in the EMC is very exciting and full of learning opportunities for me. In last I would like to thanks my manager Mr. Kameswara Tangudu for helping me throughout the journey. My Mentors Side: Working with Anuj is a good experience he learned thing quickly and his grasping power is good. He tried his best to complete things on time and in proper way. He is very eager to learn new things. It was great experience with him overall.

Chakshu Singla (2011B5A7413G)

I have interned at EMC Corporation for two academic semesters. The company primarily works with cloud computing, data storage, analytics and alike techniques. It has one of its primary COE center in Bangalore. EMC as a company is a very professional and the same time has a very relaxed and motivating work environment. It constantly throws challenges at the employees and expects you to be updated with the present day technologies. Technologies: I have learned a lot of new technologies like Kafka, Vagrant, Ansible, Docker, Hadoop, Spring XD, d3.js, R, Google Refine, Web Development tools and various machine learning and image processing algorithms. Mentors at EMC: I had the opportunity to work with three teams during the entire stretch. My first mentor Dr.Ullas Nambiar was a principal technologist in the team; he constantly kept me on my toes by keeping me challenged with new technologies and goals every week. My second mentor was Dr. Bhargav Gulavani; he is an extremely learned person. I got an opportunity to polish my systems knowledge. My overall experience: CETI, EMC Bangalore: In this team I directly reported to the CTO Dr. Thirumale Niranjan. I worked on developing a real time data stream, an analytics dashboard which captured the contextual, temporal and geographical aspects of the data collected over Twitter. I contributed to the Healthcare product which my team was working on and it was a great achievement for me. Nautilus, ECS: My second stint in the company was in this team. We primarily focused on decoding the architecture of the Apache's messaging system Kafka. Also we did a profound research and experimentation on the performance metrics of Kafka. Lifecare MARS: I worked in this team informally and I got an opportunity to work on image analytics. We are developing an image processing pipeline. I plan to continue contributing to this project as much as I can. Mentor's Feedback: Chakshu worked on kafka performance analysis project during her internship at EMC. She diligently worked on the project and

completed all the tasks assigned to her. Moreover, she was proactive in getting her queries and doubts resolved from senior team members.

Charupriya (2014H103104P)

Being a part of EMC2 has been a great experience. I already had 3 years of work experience and initially I thought it would be more or less same here as well. As I got into the team and started understanding the work, it turned out to be very different from my previous experience. In my earlier company, it was a predefined set of work and process that we had to follow, but here it is totally up to you whichever method you want to take or whichever way you want to do your work. The work here is entirely exploration on our part, how much we are ready to learn and implement. Apart from learning on our own, the mentors are really helpful. They are always there to help whenever we are stuck at any point. There are few times when even they are not in the knowledge of the solution to the problem, they take out time to search with us the potential solution to our problem and help us in any way possible (mainly motivational). They try to push us to our limits of thinking. Here my primary work was on Apache Kafka, but my mentor made me learn about docker, ansible, vagrant and mesos as well initially which helped me get an overall picture of all the working in the team. This led to a better understanding of what I was actually doing and how my work was affecting the overall team and the product. It had been a great experience and got to learn a lot. Mentor's Feedback: Charupriya worked on kafka performance analysis project during her internship at EMC. She diligently worked on the project and completed all the tasks assigned to her. Moreover, she was proactive in getting her queries and doubts resolved from senior team members.

Ankur Vashishtha (2014H112180)

My PS2 experience at EMC has been mixed. Since the delay in joining due to the merger, it has got better only. This was my first experience in an I.T. company and I was bit scared in the beginning. But much to my luck, I ended up at EMC. Everything here is awesome. The work environment, the people, the facilities they provide, the extra-curricular activities, everything is incredible. The mentor has been really cooperative. Coming on to the work, I worked on a lot of new technologies namely Microsoft Azure, Docker, Amazon EC2, Google compute, and some EMC in-house software like Content Server 7.1 and Documentum Administrator. I too have given my best. I can sum up this entire experience and proud feeling in this one line "My team dockerized the first ever EMC product on azure, amazon and Google cloud".

Parnika (2011B4A7590G)

I have interned at EMC Corporation for two academic semesters. The company primarily works with cloud computing, data storage, analytics and alike techniques. It has one of it's primary COE center Bangalore. EMC as a company is very professional and at the same time has a very relaxed and motivating work environment. It constantly throws challenges at the employees and expects us to be updated with the present day technologies. Technologies: The projects I have worked upon have given me good hands on experience on system programming. Key areas like Operating Systems (user/kernel land), System Programming, Data Storage and Techniques have been explored. I got a better introduction to Java Scripting and Rest APIs towards the end of my latest project. Mentors at EMC & My experience : I got an

opportunity to work with technically efficient people under whose guidance my learning in software development area has enhanced many folds. Under the constant pack of challenges thrown at me by my mentors Mr. Maneesh Pusalkar, Sr. Manager, PowerPath, Mr. Vinay Rao, Principal Software Engineer, PowerPath, Mr. Ankur Dixit, Manager, PowerPath and Mrs. Poonam Garg, Sr. Software Engineer, PowerPath and with their constant support, I have learnt to tackle technical workload in a more responsible way. Mentor's Feedback: Parnika was assigned a project for developing a module that can be used in the product to pass on host related information to a central monitoring utility. This involved discussing a design with key stakeholders and implementing it with limited supervision. Parnika demonstrated good technical skills to complete the project satisfactorily. She demonstrates willingness to pick up new concepts. She is a good team player.

Rohit Kadam (2011B3A7462G)

It was altogether an enriching experience to work in EMC. It was great to learn so many technologies in such a small span of time and even have first-hand experience with them. I was lucky to get great mentors and a manager, from whom I have gained not only vast technical knowledge but also the qualities and confidence to build a successful career. All the employees, cordial and ever-ready-to-help, taught me something or the other, directly or indirectly. An employee-friendly and learning-conducive environment is what makes this company one of the best places to work in. Also, I would like to thank PS division for all the hard work behind giving us students an opportunity to have such a wonderful platform to grow. Mentor's Feedback: Rohit is a quick learner and enthusiastic in both designing and development with consideration towards software component modularization and object oriented aspects. He could build different prototypes of the applications taking inputs from various stake holders in short span of time. He was keen in analyzing business use cases of the feature he was working on and provide suggestions for improvement.

Sachin (2011B5A7425G)

I have been working as an intern at EMC for almost a year now and it has an enriching experience. I worked for the ECI team, in the first semester of PS, where I got the opportunity to work on technologies like Docker, Openvswitch and Ansible. In the second semester I was shifted to the Nautilus team, wherein my work revolved around Mesos and my task was to implement a few REST APIs. Most of the work was to be done in Scala. There were times when there was no work and there were also times when I had to stay in office till 9pm to complete the tasks assigned to me. Overall, it was a very good experience and I'm happy that I chose EMC as my Practice Station. Mentor's Feedback: Sachin is always eager to learn new things .He has proved his ability while working on designing and implementing REST APIs for ECS Mesos Framework. He took initiatives to identify problems and devise better solution. He consistently completed tasks assigned with utmost competence. His extraordinary communication skills makes him a great team player. Thank you for your work! I really appreciate what you have done!

Shikha Saxena (2011B1A7572G)

As I continued this semester with same team-MDMO (My Documentum for Microsoft Outlook) in EMC, I had the opportunity to work on new project with few experts of my team .This semester my experience was very important for my career and pretty challenging as well. I got aware with agile methodology used

in team, product legacy code ,solving patch issues ,user cases and also solving bugs raised by Q.E.(Quality Engineering) .I used to be part of scrum (standup) held every day in which we had to give update or progress of the project we are working on to the manager along with all the other team –mates .My project was based on WPF using C# and it also used existing product code in C++ , with title – "Save Search for new search UI of MDMO ".We also had few fun activities as well in team like team-lunches ,throw ball match ,getting power banks to senior developers of team and to me as well by quarter budget . So, finally got well aware and have been part of the functioning of team which includes everyone – Developers, Q.E., Senior Managers, Product Owner and Project Manager.

Vivek Vikram Singh (2014H103101P)

Practice School (PS) at EMC, Bangalore has been a very good experience for me. Here I got to work on some state-of-the-art technologies used in industry. I think the PS is one of the best courses I have completed in my degree. There is nothing comparable to real world experience. Working at MNC, I gained the experience of how MNCs' workflow, the work culture, the projects. I have learned a lot from colleagues as well as team leaders at EMC. The work culture is quite good which includes flexible working hours. It is really important to decide what you what to achieve from an internship so you choose the right one for you. I wanted an internship that would stand out on my CV and allow me to make new friends. I can say I am very much satisfied with this internship. I faced several challenges which are common to every new employee but overcoming them was not very hard. Overall it was a good learning experience.

Company: Exponentia Data labs

Appurv Gupta (2011B2A1660G)

In the beginning of my PS work consist of database creation and extraction of data from Database. The work consists of learning using basic excel commands, SQL, Qlik etc. Of Couse this doesn't took much time to learn. Than the work consists of learning and creating sample dashboard for Qlikview, Qlik sense. After this work consist of creating and manipulating text using R. Learning a new language requires bit of effort in the beginning than it requires regular practice so I was regularly working on learning R basic commands, learning data types, manipulating data. Afterwards The task was given to create Demo dashboards for MFIs i.e Micro Financial Institutions taking the sample case study of AAA Micro Finance. Another task was given to create dashboard of a payment gateway. In this firstly the data quality was assured and based on the data quality further analysis was performed. The size of excel was quite big and system was getting hanged again and again. So on the server Qlik sense QVD was created and this QVD was used again. So Overall experience of PS was quite good in terms of learning that I have got over here. So in short work is based on Business Intelligence and Data Analytics the work was to extracting the data, clean the data, analyze the data and presented it to the client.

K Krishna Karthikeya (2011B4A4531G)

I thank BITS Pilani for giving me this opportunity to explore the industry before even graduating. My PS station is a startup and work culture matches your thoughts on a startup. The projects I have done in PS were mostly based on Business Analytics and Text Analytics. Text Analytics is one major emerging field as

we have got vast amount of data in text format and machine learning can be applied to get many beautiful insights hidden. The tools which are majorly used are R and python which contain many useful packages and will make your work easier. I have also worked on Cross sell Analytics which involves a lot of business understanding. We have to learn Customer Behavior and how do we analyze different sets of customers in a different way. I have handled the complete project alone and I am glad to say that I was successful to deliver the clients what they wanted and beyond. They have run a campaign on the basis of our results and they wish to measure the success rate.

Chantal de Souza (2011B1A1676G)

In the five and a half months I spent at Exponentia Datalabs, Mumbai, I have gotten the opportunity to immerse myself in the start-up culture, learnt how to analyse vast amounts of data by utilizing the BI tools at hand and been under the mentorship of some of the most innovative entrepreneurs in the country (one of them a BITSian himself). What started out as a 2 man army venture a few years back has now reached the final frontiers of data analytics across the globe. And the company only strives to achieve more. The culture within the company is unlike any other, with a blend of professionality and casualness one can only see at a start-up on the brink of success. The hardworking, yet laidback attitude was easily imbibed by us interns as we accomplished task after task allotted to us. For those looking to pursue a career in Data Analytics, this is the place to be… with an added advantage of exposure to the start-up scene. Peer interactions are sure to inspire you to give your best and everyone is ever ready to help out. Also as a side-note, Mumbai as a city, is sure to amaze you if you're not from here, and survival here on your own, prepares you for survival in any city in the world. I dealt mainly with Data Extraction, Data Cleaning, Data Modeling and creating Dashboards for our clients in the domains of Forex, Healthcare, Finance and Outsourcing Services. Basic knowledge of DBMS, using BI tools such as Qlik Sense and QlikView, MySQL, Advanced Excel. The skillsets were acquired on the go. There is always a mentor for help. What was your take back from the PS-II experience – Write a brief note on PS- II experience in terms of new learning, expansion of knowledge base etc. Overall, a very enlightening experience. The start-up, non-hierarchical structure lets you bring a lot to the table as an intern and all inputs are valued. Gives a fair idea about the Data Analytics Sector. Any achievement or any other experience you want to share. Interns are allowed to accompany seniors to client sites, rarely found in MNCs.

Company: Flipkart Internet Services Pvt. Ltd., Bangalore

Neha Anoop Alreja(2014H103087P)

As part of my Practice School 2 I interned with Flipkart in Bangalore. I arrived in Bangalore a week before the internship date to start looking for accommodation near the office and found a PG at Marathali which was around 5 kilometers from my office. The first thing which catches your attention is the amazing office architecture. Since I had already worked in a startup milieu before joining BITS I was expecting regular office cubicles with perhaps some frills but when I entered the office I was bedazzled by its exquisiteness, every floor had its own theme with marvelous conference rooms, delightful common areas and comfortable seating. Every small thing has been taken care of with utmost attention, from the placement of reprographics to the arrangement of the desks. The first day was a little overwhelming with a lot of people trying to befriend me and asking questions to which I repeated my bio-data like the first day of

college. As a fledgling intern my greatest endeavor was to lean the tools and technologies being used at Flipkart. Since my prior experience was in .Net technologies I was not so comfortable in working with Java and other open source related tools. This continued for a couple of days while my mentor, manager and team members' brain stormed on my project. I was usually part of the discussion physically but couldn't really participate since I wasn't aware of the domain, the tools and the technologies being used. For the most part of the first two months I was participating in requirement meetings, design discussions and skill development tutorials without writing any code. At one point, I remember consulting my mentor on the fact that whether I would be writing any code during the internship to which he said once you start you'll be writing code till your last day – he was correct. Once the development started all my office hours were spent writing code & I was able to finish my project with great help from my mentor, manager and team members. Looking back, I feel it was a right decision to choose Flipkart, Bangalore as the PS-2 destination. It was the first time I was living alone outside my home (Pilani was always a home to me as well), I learnt a lot about work as well as about life. My fellow interns were friendly, my team was affable and my mentor was empathetic. Initially there was not much work but when everything was finalized (which took around 2 months) I was given interesting work. Commuting on weekdays is always an issue in Bangalore while weekends were amazing with my friends & colleagues. I did not want to work in Bangalore hence did not apply for a PPO. My journey with Flipkart has been an amazing experience and it would be a fond memory for the rest of my life.

Leena Devisetty (2012C6PS470H)

Overall work has been satisfying. The interns were allotted into mainly two teams. One is "Seller Platform" while the other is the "CustomerService". My team is Customer-Service where all the issues from the customer both in preorder and postorder are handled. Various sub-teams are present which work on telephony, machine-learning , NLP are present. Learning and work-culture is very good. Interaction within the team is lively and you can approach to anyone in your team for queries. I have learned how the whole customer call centre works in an e-commerce platform, and also the whole telephony procedure. (like the CTI - Computer Telephony Integration) Here, there is a chance to learn a lot of new concepts and there are no restrictions in code structure, but many of the teams use Java only. The timings are flexible and you can work according to the timings of your team. The work stress for interns is a bit less but for full timers, they are tend to work on weekends also, but that even depends on the team. You are allowed to work on the Prod environment directly, this kind of exposure will not be obtained in any other company. you are allowed to work on many topics of your interest, apart from you work. Various learning sessions are also conducted by the company for the academic improvement of the employees, where interns can also attend them. Overall, very good working environment and best place to learn a lot of new concepts.

Pavan Ravishankar (2012C6PS331P)

Project involved analyzing customer complaints by mining frequently occurring patterns in complaints, grouping complaints based on issue or other parameters, providing metrics of number of times team's resources are used by clients and call center agents. To handle huge size of data(3050GB), parallel variants of algorithms were used. Along with solving the problem, picked up elegant coding styles in JAVA like Google Guice and caching when required(InMemory vs Centralised).Technology Stack: Dropwizard, Apache Spark, Spark Mlib, Spark SQL, Codehale Metrics. How did I acquire the skills? I went through

documentation and online resources while picking up concepts. If this does not work, "ask" team members/devchatter(ministack overflow at Flipkart)/walk up to anyone and discuss your problem. It's as simple as that! Take back from PS? I would like to emphasize on elegant coding style once more. This is what differentiates student from an industry person. Read about "System Design". Most of the companies like Linkedin, Google, Facebook, Quora, Square etc open source its design via engineering blogs. Give it a read. It's worth your time.

Samiksha Sharma (2014H103022)

The overall experience during my five months' internship at Flipkart Internet Pvt Ltd, Bangalore was great. I was not just well trained technically but was also exposed to the high working standards of the company, the very flexible and optimized working conditions, highly qualified and experienced employees (including top level managers) with whom I had a constant interaction at daily standup meetings and could share my training issues as well as indulge in planning discussions for upcoming tools. The working hours were flexible which were around 8hrs from Monday to Friday. I was working in "NLPTech" team in the Customer Service vertical of Flipkart. My team was involved in the development of projects like social media sentiment analysis, using Machine Learning techniques to identify patterns in Big Data, developing CustomerAgent Chat for an enriched user experience, etc. My project dealt with Supervised Classification of Product Reviews given by Flipkart's customers to identify if the review was a complaint and to create an incident for each such actionable review. The objective was to create a tool which facilitates Natural Language Processing of review data and classification of reviews into Actionable and NonActionable reviews using Machine Learning Algorithms. You are not expected to know any software beforehand and sufficient time is provided to learn the prerequisites for the project. I had weekly review meeting with my mentor and manager which were very important for the feedback and continuous improvement of my performance. All the employees were very friendly and were ever ready to help me all the possible ways. I even had access to the planning meetings of the whole team where my suggestions were always welcomed. The company also organized team outings full of teambuilding activities which added more to the experience. So I would say this is a very huge opportunity which will not just add to your resume but also help you hone your soft skills. While implementing my project, I learned Maven in Dropwizard, used Morphia client for Mongodb and learned to use a wide variety of web technologies including HTML, CSS, Javascript, JQuery, Angularjs, etc. The Machine Learning techniques I learned during the course of my project are listed below: 1. Supervised Learning Algorithms: Naive Bayes, Bernoulli's Naive Bayes, SVM, Linear SVC (onevsall technique), Feature selection and extraction, Analysis of ML algorithms on the basis of precision, recall, accuracy metrics and tradeoff between precision and recall, Calculation of Bias, variance, regularization, Model selection, error metrics for skewed classes, Feature set selection for anomaly detection. I completed the Machine Learning course offered by Prof. Andrew Ng, Stanford University through Coursera to facilitate the process of learning ML techniques and their usecases for the project. Overall, it was a very enriching experience as it helped me widen my knowledge base and awareness of the working of ecommerce business.

Ujwal Moreshwar Kohad (2012A7PS174H)

My PS-II station is Flipkart, Bangalore. I have been working here as a part of Seller-Platform team. Past five months have been an amazing Learning opportunity for me. I was introduced to various programming

concepts and was provided with a platform to implement those concepts. Major chunk of my project involved development In the Java Language. For the implementation of the project, I had to Learn various concepts like dependency Injection, setting up config, auditing, UI development. middleware concepts, Restful services, Object relational mapping, etc. Apart from learning various software related concepts, I have also realized how working in industry is different from academic projects. In industry there is a lot of emphasis on correcting the corner cases associated with a given program. Also, the programs are subjected to large number of stress tests so as to make them as bug-proof and future-proof as possible. The programs are also reviewed by various people to reduce possibility of bugs. Moreover, even while writing a program, a lot of emphasis is laid on making it easy to read, understand and manage. These kinds of programming practices are very typical to industry. Practice School experience has also helped us become familiar with the essential attitude and the working environment of companies. We also got an opportunity to interact with and learn from many people who already have a lot of experience of working in industry. The constructive feedback from them has helped us in developing new skills as well as refining other skills. Hence Practice school has provided us ample opportunity to implement the techniques learnt in classroom as well as learn new concepts. I sincerely believe that due to this hands-on experience we are now better prepared for the future and experienced gained here will help in smoother-transition from academics and I am really grateful for this opportunity.

Company: Genpact, Bangalore

Kranthi Vidhatha (2012A5PS931P)

The first day of the internship was one of most nervous days for me, being a student with no knowledge of how the corporate world works. But actually was quite normal. My team was quite friendly, one of my colleagues was actually my TA in college. I was given a brief orientation about kind of work done and the clients they cater by my manager. I was part of a research team in "Healthcare and Lifesciences" domain. Soon the work began and we were allowed to attend various client calls and watching our mentors talk to the clients helped us in understanding how exactly to deal with the international businessmen. This helped me develop the required soft skills. I was assigned to a client, one of the largest pharmaceutical companies in the world. Dealing with an American client required me to learn various approval processes of FDA, patent filing, major players of the US healthcare and pharmaceutical market. My manager asked me to make a weekly newsletter capturing various regulatory updates, product launches, industrial trends, etc. This was an instant hit and I was well appreciated. Genpact helped me learn about various scientific and patent databases and also brush up my knowledge in epidemiology and pharmacy. Working in this organization has helped me understand that in order to excel in what we do, we not only need to have great skills but also a good personality and right decision making ability. I will never forget my experience here.

Loukic Gowru (2012A7S058G)

The overall experience at Genpact, Bangalore was great. At first I was unsure of myself, how I would fit into the corporate culture and that I had to work absurd timings. But my first day proved me wrong, the timings (10 am – 6pm) were the best timings I could hope for. The office culture was very good, even high level managers would come and to talk to me as if I were their equal. When I was first given the project, I did not understand anything. It used so many different and new softwares that I had never heard of. This

project was developed by some previous members and I was given the task to add new features and debug the existing bugs in the code. In short I was asked to optimize the code. The project required knowledge of these two softwares: Apache Kafka and Hibernate. Kafka is a message broker system and hibernate is used to communicate with a database from the eclipse console instead of opening the database software separately. Before I could start learning the project I had to first become familiar with these two softwares, so my mentor Mr. Keshav Shrikant made me write programs using the softwares separately. I first wrote a simple producer consumer Kafka program and the made an advanced version of the same thing. With hibernate I had to make a basic CRUD operation program. After that I was asked to create a website which asks users to login or signup for something. Then are redirected to the signup page or the login page whichever they click. New users have to signup and registered users must login. In the sign up page the users are asked to fill in their details which are then stored in a database using Hibernate. When the go to the login page and enter their details they are then matched with the ones in the database if they match they have successfully logged in if not they are asked to retry. Writing these programs made me familiar with the software needed so I went to learn the code written. I was able to fix the bugs which were causing problems to the users. While working here, I learned how to effectively convey my problem to others and get my problem solved. I learned the importance of teamwork and how individual performance doesn't matter if the person is not a good team player. I have met some very knowledgeable persons while working here and I have learnt a great deal from then.

Company: Genpact, Gurgaon

Mohammad Mushir Khan (2014H149250P)

It has been rightly said that every experience teaches an individual some or the other lesson and so does this one at Genpact – Gurgaon as part of the Practice School Program. If I were to throw light on my past 5 months of experience at Genpact, I would recommend it as something which would differ from perception to perception. Genpact is basically known for its high quality Training being provided. I was associated in the Profile of Analytics into the Know Your Customer, i.e. KYC Team. Genpact as an organization basically serves for General Electric (GE). GE has got different lines of businesses like Oil & Gas, Power & Water, Aviation, Energy Management, etc. Whenever a client or a customer approaches GE to avail its product or service then once the Pricing element is discussed there comes the process of payment which seals the agreement. However before the payout, GE wants that its client/customer to be Loyal in terms of payment not just for that particular time period but also in future. For this, it carries out the process called Know Your Customer (KYC). Coming down to the work task, although the profile is of Analytics however what I carried out throughout the period can be categorized into three areas: Preparing the KYC, Due Diligence and ITP Reports of the Clients. Resolving the Bridger alerts. Handling the request on GE's internal tool. The work involved lot of secondary research, use of GE's internal tools, analysis part and final recommendation which is then sent to the ITP/Compliance Team. This is basically Manual analytics part being carried out where only reputational risk of business is involved. As an intern I was not exposed to the actual Analytics part further which involves thorough analysis with the financial reports and where commercial risk is involved. So, overall in terms of work I would say there was less Technicality being involved and as such it depends whether that job excites one or not. Regarding the organization culture and environment, I would recommend it as an option where there is ample amount of flexibility and work life being balanced. The entire Team has been very supportive in terms of guiding me towards accomplishing the task being assigned. There were sort of Compliance issues in the very first month of PS

due to which we were not given access to the GE data and that is because Genpact does a very detail background verification check for its new joining. Coming down to conclude, I would recommend this PS for the students who wish to explore their career in the field of Credit Risk or Pricing Analytics; however for KYC, one needs to be self prepared and clear in terms of the career path that this profile would land for him or her to follow. Thanks to Genpact for the Professional etiquettes I learned. Good luck to all the aspiring readers.

Shreyans Singh (2014H149238P)
The overall experience at Genpact, Gurgaon was great. I was not just well trained technically but was also exposed to the high working standards of the company, the very flexible and optimized working conditions, highly qualified and experienced employees which were ready to help and support me anytime. Office timings were fine (12-8 PM) which helped me maintain a balance between my work life and personal life. I have explored several new types of finance related tasks. Tasks like credit limit, credit ratings and bankruptcies have helped me to gain insights about financials of companies, i.e., how to observe companies' financial health by monitoring their financial records. I was working on two projects i.e., Credit Risk Analysis & Order Processing. Both my projects have been done simultaneously by me as daily I had some targets to complete. I have been trained for the work by Genpact employees and they have helped me learn a lot as expected by me for my first corporate exposure. My projects have surely helped me gain practical knowledge and work of two domains of finance which is very fruitful for me. I have learnt working with new finance related softwares like customer connect, credit catalyst , eRAM , credit risk monitor , SAP (system application product) etc. Surely it was a great exposure for me as I acquired several skill sets related to financial fundamentals. My work was praised by my manager as I was very productive and efficient in my work. So, overall it was a healthy balance of learning and delivering.

Company: Grey Orange Robotics India, New Delhi

Ambuj Mehra (2011B5A3616P)
My Internship at Grey Orange has been an awesome experience. The quality of work given to me and the mentorship provided was great, I learned a lot about new Technologies, understanding corporate life, expert guidance and apprehending new technologies and their developments. This PS2 internship has given me exposure to corporate life and gave me a better understanding of the startup culture and the processes involved in end to end product development. Working at Grey Orange, I realised the importance of writing efficient and scalable codes. I was member of Butler Server Team and worked on the Butler interface part of the Team. The team basically wrote Backend RESTful API for interaction between Butler Server and Client, I was new to backend development so was a bit scared, but my mentor Paul John helped me with the concepts and gave me time to get familiar with new technologies. I was part of 4 member team for creating Manager Dashboard backend API's for the Grey Orange Butler Client, the project started from scratch. The main thing I learned was Design of manager dashboard how to work on architecture of your project, and how to make it scalable. After this I was given project on GPMS (Global Peripheral management System) Scanner integration, the requirements was to implement GPMS_v2 protocol for scanner and make communication of scanner in warehouse to GPMS bridge over multicast and TCP. I learnt many new skills during the course of my internship. Firstly, I got exposed to the world of backend

Development and its applications in the development of real world applications. Also, I got to learn about version controls like Git. Finally, I learnt about handling pressures like delivering the code on time. Secondly, you get to work on real life projects which teach you many things that you don't see in college. The new technologies coupled with great mentors, give you a fresh perspective to developing things.

Pranjal Agarwal (2012A4PS334P)

My project involved setting up an inventory replenishment model for a client for the butler system. I had to read about doubleechelon inventory systems to understand the difference between it and regular systems and the various costs involved in maintaining such a system. First, I created a formula to derive the quantity of an SKU to keep in the forward picking area based on the data provided by the client. This was a static analysis in which the inventory was split into two parts using just previous data and then many different possible inventory sizes were considered, each having their own costs associated with them. The inventory with the minimum total cost (CAPEX + OPEX) was considered. After this analysis, which was on a static database, the next step involved creating an algorithm that could reassign inventory as the demand of various SKUs changed. Next, the algorithm was tested on the client's historic sales dataset. To facilitate the simulations, a python script was written which used an SQL database. The algorithm was then trial run with several settings, by changing variables around, to find the best configuration which would ensure a fulfillment rate of more than 98% from the forward picking area. To complete this project, I needed knowledge about inventory management and how to work around MS Excel, which I was able to learn from the internet. As for studying about multiechelon inventory systems and dynamic inventory systems, I was given relevant research papers to read and the team shared information.Over the period of the project, I really got an understanding of how the production process occurs in a company, the various stages of research & development involved in making complex products, and since this internship is long (5+ months), I truly got to understand the many stages of completing a project.Here, the environment is very mobile and people are used to working with deadlines looming ahead. You are allowed to pursue whatever topic you are interested in and aren't restricted to your domain. You get to learn many new things here because most of the people here are either very young (>25) or very experienced in their respective fields, which makes it a great learning opportunity for freshers.

Aditya Bansal (2012A7PS122P)

My internship at Grey Orange Robotics was an amazing experience considering the technicality of the project I was assigned and the work culture. Being one of the fastest rising startups has its own advantages – I got to work on upcoming products that would be used by companies like Flipkart. The people I met here are immensely talented and I learnt a great deal by just talking to them. The kind of faith that was shown towards me was a bit of a surprise for me (as well as a huge responsibility in itself). The constant faith my mentor and my team showed in me was very encouraging. This PS2 internship has given me exposure to the work culture at a startup and gave me a better understanding of how a company works and the processes involved in end to end product development. I learned the importance of writing good quality code which is acceptable for deployment purposes. I was a member of the Sorter Server team which deals with one of the products designed and manufactured at Grey Orange - Sorter. There are two

types of Sorters this team works on : Linear Sorter and Cross-belt Sorter. I was mainly involved with the development of the Cross-belt Sorter. The main idea behind my project was to check whether the program implemented for the sorter is functioning properly in a development environment. A simulator is needed for this purpose because of the external dependencies such as data from other systems, sensors, components etc. This simulator helps in eliminating all these dependencies to mimic real production performance. Overall it was an enjoyable experience and I thank the Grey Orange team for making me feel at home in the company.

Anurati Srivastva (2011B1A3683G)

I interned as a UI/UX Designer at GreyOrange. I worked on creating user interfaces, optimizing user experience and user research. I also worked on creating graphic design, logos, branding and identity. The major skill sets required were Photoshop and Illustrator tools, brand research and a keen aesthetic sense. For the first month, I was given various mock projects to polish off my technical skills in design and once I gained proficiency in them, I was handed over major projects that went live online. I worked on various dashboard designs, app design and logo design. Each deliverable went through a meticulous process of multiple iterations and a well thought out design process. I was also involved in video editing and animation for their product videos. Thus, I gained a fair knowledge of Adobe After Effects as well. The amount of responsibility and work given to an intern here is immense. I was the sole point of contact of various projects and am involved in the product right from conceptualization to the design finally reaching the user. At GreyOrange, I've learned how a midsized startup works and transitions into a firm. Being my first stint as a corporate designer, the learning has been immense. I've been thrown into the deep end in the world of design and learnt right from the basics of design. I have acquired proficiency in design tools and feel confident to step out a professional designer. Seeing my designs on tangible products is a feeling I cannot express and when people appreciate your work, it feels that you might just be headed in the right direction.

A.Deepthi (2012A4PS244H)

Grey orange robotics is a warehouse robot manufacturer with immense learning opportunities in various core fields: Mechanical, Electrical, Software, Embedded. We get to work on the same projects that the full time employees work on and this way we gain immense knowledge through the hands on exposure. Companies rarely allot interns to the R&D team, but here anyone with a good technical background can be allotted into the R&D team. Most of the workforce here is young and enthusiastic and hence one can connect with them easily. One can learn a lot from them by just carefully looking at how they approach the problem and asking as many good questions as one can. People are sweet and will not hesitate to guide others. Since the work force is mostly young and not with a past work experience to boast off, to start any new project, everyone starts with the research and hence everyone is on the same level and one can always catch up by doing their own research about it. The Mechanical R&D team is full of knowledgeable and helpful people who are willing to share their knowledge. The team meetings and discussions are conducted in a manner that help to keep everyone on board and to discuss new topics and share and gain knowledge. I was assigned one major project apart from the various small projects. We were supposed to design a test jig which would be used to calibrate the driving motors of the robot wheels. Generally, calibration is long and tedious task, to reduce this effort we made a test jig which allowed the motor to run in the working condition continuously until the solution converged. To enable this, it was ensured that the assembly could keep moving in circles so that the distance and time are not

limited. After extensive collaboration with the electronics and embedded team, who would have to work on the jig, the design was finalized and manufactured and assembled for future use. Skill sets: CAD designing basics; we research and learn most of the things when the requirement turns up. Being a start-up, Grey orange provides everyone with a lot of learning opportunities. Since we design the parts and oversee the testing, manufacturing and assembly, one can gain an overall experience in all the fields. It offers practical experience where one can learn from their mistakes and revise and perfect them and learn from their as well as others mistakes. Since they are just a start-up, they are open to the fact that mistakes happen and that it is just a way of learning. We learn that there is a lot of difference in theory and practice and one needs to have some practical knowledge to convert a design into an actual part. Overall, it is a great learning opportunity, especially for those interested in R&D.

Company: Here Maps - A Nokia Company, Mumbai

Ashutosh Luthra (2012AAPS891H)

My PS-II station is Here Maps Mumbai. I have been working as a part of Data Infra layers Team. Past five months have been an amazing learning opportunity for me. The time spent at PS-2 has been a great teacher in various spheres, for understanding corporate life, expert guidance, learning new technologies and their developments. I started as novice in the domain of web developer but after spending such a long time and working on live projects, attending scrums. I came to know how what is corporate life. My project was mainly to add features to the company's internal application and modify it and I learnt all the technologies like Scala, JavaScript and AngularJS from the internet. The industry is working on feats that are much ahead of what is taught as academics. Sure, the basics are still the same; but constant learning is not a myth- it's the very reality we exist in and PS-2 has just been a reminder of the same.PS-2 helps one to build their persona, knowledge base and interact with industry experts. The experience at PS-2 - if not affect my future career prospects - has at least made me aware of the current industry standard and situation and that adds to better chances at scoring a workplace.

Dinesh Jagannathan, (2011B3AA620H)

My Practice School was in HERE Solutions, a provider of mapping data to various sectors, under the mentorship and management of Danny Savla. I was initially very skeptical and nervous owing to the fact that I am an Electronics Student interning at a PS station clearly intended for Computer Science students. I was also very new to the technologies employed at the organization. But my first meeting with my mentor eliminated all my fears. They were completely understanding of my situation and helped me get acquainted with various popular technologies in Web Development (JavaScript, HTML, Angular JS, Node JS and Mongo DB) in fairly short span of time. They taught me to learn by exercise. My first project was to develop a full stack web application using the MEAN stack (Mongo DB for the back end databases, Express and Node JS to script the servers, and Angular JS to render the front end). They had progressively increased the scope of the project while I was learning the technologies required in the project. I had acquired the requisite skill sets through online tutorials on the subject and practice. Throughout the second half of my PS, I was working as an active team member with targets assigned to me that would always be new and interesting. Their requirements from me would ensure that it was always in my grasp but never fail to challenge me and stretch me to my best. It would always keep me on my toes and they would assure me that I was on the right path to the target.

Mayank Jha (2012A7PS111G)

In the 5 months at Here Maps I experienced numerous aspects of work in a professional environment. I got to know what is to be expected, how to conduct oneself in a professional environment and to be patient if things do not work out easily. Also I got to know a lot about the current technological practices and learnt how to use them as well. The entire experience has been very satisfying. The employees at Here are friendly and always willing to help whenever you need it. One can also approach the managers and they will always be ready to address any concerns. My mentor is the Principal Engineer here and as such is always very busy. Still he would give his time whenever I was stuck. In my case, I was given time to learn how to work, what is expected and how to make things better than what has been implemented. Although there is a huge difference in academic projects and an actual professional project in terms of technologies used, having a good understanding of basics always helps. I was allotted to work on implementing the user interface for drawing roads along with the actual number of lanes on top of maps. This was mostly dependent upon knowing web technologies and devising code to layout the lanes in the desired orientation on the map. Implementing this took time but it was very satisfying when everything worked fine. During this time I also learnt how to actually code so that it can be implemented for professional use, basically it requires implementation of OOP concepts and to be able to break every step into small functions so that the reusability of the code increases as well as it becomes much easier to debug and understand. Then I was asked to devise something for predicting the flow of traffic along the lanes of the road at junctions (i.e. which lane would the vehicle go if it wants to turn left or right or go straight at traffic signal stops). I got to know about web services and how to use them as I needed to access data which could only be accessed by pinging two of their web services together. We are trying to implement this project using a neural network and after all the setups we will have to see the accuracy of the model which we have implemented. This is a very exciting project and I am still working on it. After working here, I now have some idea of how web technology works and also increased confidence to solve new types of problems. Definitely my skill level has increased than what it was in college and that too at a much faster pace. Also my soft skills have also improved, which is very important for the professional sphere. Overall I would say PS-2 is a great opportunity to learn and get accustomed to professional environment.

Ankit Kumar Sood (2014H112197P)

I'm about to complete my PS 2 at HERE Maps. The company's origin dates back to 1985 where it started as NAVTEQ and went on to be a subsidiary of Nokia. Currently, it is a joint venture of Audi, BMW and Daimler AG. Here is a multi-faceted business in the provision of mapping data, technologies and services to the automotive, consumer and enterprise sectors. The technology of Here is based on a cloud-computing model, in which location data and services are stored on remote servers so that users have access to it regardless of which device they use. I work with the extraction team, which concerns itself with making out meaningful information from map data collected. I'm responsible for building an analyzer for GDF documents (they are the documents which store maps data), in the form of a java API. Though I had expected some serious data mining work as was mentioned in the PS portal, it was a good learning experience as far as coding as per the industry standards is concerned. I learnt how to write clean and maintainable code, by following some of the best Java development practices. My mentor, Mr. Paresh Patel is an architect in the team and a very experienced and knowledgeable person and helped me understand a few of these industry level coding practices. The company offers flexible working hours to all employees and interns. All my teammates are cooperative and helpful people. Besides this, I, along with a few of my teammates am participating in a Hackathon being organized by HERE. It's an annual company wide application development competition where all employees and interns are encouraged to come up with an innovative idea for an application. I came up with an idea for a trip recommender system

using a number of open source APIs; navigation like that of HERE, travel like that of trip advisor and restaurant APIs viz. zomato, yelp etc. This application would use machine learning principles to suggest and plan out a vacation for a user, as per his choice of location. As my internship come to an end, I believe the entire process has taught me a lot, both on technical and non-technical fronts. I hope to cherish it for the years to come. I'm responsible for building an analyzer for GDF documents (they are the documents which store maps data), in the form of a java API. They'll help people building maps to analyze the geographical data collected. I was comfortable with Java, Software Design Patterns skills, but wasn't much familiar with coding as per the industry standards and my mentor helped me with it. I learnt how to write clean and maintainable code, by following some of the best Java development practices. My mentor, Mr. Paresh Patel is an architect in the team and a very experienced and knowledgeable person and helped me understand a few of these industry level coding practices. I got an insight of how maps are developed and maintained for navigation purposes.

Company: Hike, Gurgaon

Param Shah (2011B4A7532G)

During Practice School 2, Second Semester 20152016, I worked at Hike Limited, New Delhi as an android developer for the Growth Team. The Growth Team at hike is focused foremost on acquiring new users and then to engage and retain them. Towards this end, the team continuously works on 'growth hacks' which are low cost engineering solutions to make the user discover hike features and fall in love with the app. As part of my project, I worked on implementing a number of such hacks for the hike android app. The primary skillset required for the project was android development. Whilst we don't have any related course on campus, it is easy to learn as it is Java based. I learnt it in hike itself during the first month of PS2. Other android developers at hike were very supportive in this regard. Technically I should refer to them as my mentors but with the camaraderie among us, it would be an insult to think of them as anything but friends. This is one of the most important things that I will be taking away from this PS2, new contacts and friendships which I hope will last a lifetime. To me the culture at hike will always be a definitive trait. There is a passion in everyone who works here which is highly contagious. Working at hike is definitely not a smooth ride. It is a rollercoaster with lots of ups and downs and some very difficult turns. But that is what makes it so much fun. I have had a very steep learning curve during this PS2, ranging from my programming skills to interpersonal skills. The industry operates on a completely different wavelength from what we assume or expect in college. The 5 and half months I spent here have helped me understand this and provided me a first hand exposure to work in an organization which is a pioneer of the industry and to contribute to a product which is being used by millions of users across the country. There aren't enough words to describe how gratifying and enriching an experience this has been. The best way to summarize this PS2 would be to say that before this I knew computer programming and now I know computer engineering.

Neha Dua (2014H103099P)

Interning at Hike has been a very good experience. It helped me in preparing myself to face the challenges in my upcoming job. This duration of 5 months has been a great teacher in terms of corporate experience, learning new concepts and technologies, understanding start up culture and facing challenges at workplace. The training involves applying the concepts learnt in college. It gives the practical experience by working on real industry projects. It trains us for the upcoming challenges to be faced in job. It helps us in understanding what kind of situations can occur at workplace and how to handle them. It also gives us the opportunity to learn new concepts and technologies and apply them practically at the same time.

The whole internship is dedicated towards learning only. It is very useful for freshers who have never got the industry experience. It turns them into early risers from lazy slobs at college and also makes them responsible. Internship being slightly lenient from actual job gives the opportunity to focus just on learning as much as possible. The guidance from mentors at PS helps in learning easily. My experience has been very good in terms of this. My seniors were always ready to help me and guide me. Without their support, my learning experience would not have been so good. Employee experience is great; and it helps in building the initial industry base for future prospects. It teaches us how to work in a team, collaborate with team members and take ownership of tasks. Taking ownership of tasks helps in building confidence, personality, and knowledge and improves leadership skills. Things taught in college are just not enough. The industry is working on feats that are a century ahead of what is taught as academics. Sure, the basics are still the same; but constant learning is not a myth- it's the very reality we exist in and PS-2 has just been a reminder of the same. It also helped in learning quickly the new concepts and applying them in project. Working under deadlines makes us active and a quick learner. We get a chance to know about various tools and software being used in industries. The initial one week in the company was all study, but that is exactly what sets a tone for the next five months at office. I fully utilized that one week to learn Android but my concepts became clearer while working on the task assigned to me in the second week of internship. The practical experience makes learning more interesting. We read, try, do mistakes, again study and repeat. Also this gives us the opportunity to explore various other concepts during implementation of a particular concept. I have successfully completed Stickers Management and Promotion project that involved developing four features related to stickers. It involves: Delete Pack feature, Sticker Settings Refactoring, Shop Banner and Replacing ListView with RecyclerView. The first two features have been successfully shipped in market.

Company: HolidayIQ.com, Bangalore

Karthik Pattabhi Raman (2014H149261P)

Product Management is an interesting upcoming domain in India. It requires us to be very customer centric with good problem solving skills and being creative. Before the PS Started, I heard lot of good things about this profile and I experienced all of that here. HolidayIQ is in a growth phase and are getting aggressive with Video Reviews of Hotel to differentiate itself from competition. When I started, I was pulled into Video Reviews. I started with talking to customers over phone, visiting them in hotels to get their views on our product. This is where I learnt the problems in our product and suggested the recommendation to the company. We implemented that and our exit rates dropped like a bomb. This was amazing for me as I could see the impact which is very difficult to witness in bigger companies. I was handling the mobile product. I designed things, coordinated with various stakeholders to make sure we are moving towards our goal. I learned how to scale things, what is material design, how to structure information, running various experiments and saw real time effects of them. In short, learned a lot about startups and how it works. Technically, all of this was great. From the managerial perspective, I was given freedom to take the decisions. For an intern, this amount of responsibility given to me is very rare to get. This experience was very enriching and I am very grateful to HolidayIQ for giving me this opportunity.

Bivash Barua (2014H149270P)

My PS station is HolidayIQ Bangalore. I have been working here as a part of Product Development team. Past five and a half months have been an amazing learning opportunity for me. HolidayIQ.com is India's first & largest holiday information portal powered by thriving Indian traveller community & experts, enabling travellers to discover, plan holidays and share holiday experiences. HolidayIQ.com gives highly customized, rich information and insights on places, hotels, sightseeing and transport made uniquely relevant for the users. Currently users select a particular destination or a hotel by reading the reviews. They have to read reviews of different hotels in order to get a good understanding of the place and the various stay options in that location. This is very time consuming. We want to solve this problem and help user to find his or her desired location and stays in a quicker and better way. This project provides a user friendly way of deciding leisure accommodation instead of reading long reviews. We will display the unique pegs for every destination and hotels which will give the users a good insight about that place. I was also involved in monitoring and analyzing the current performance of the Holidayiq app, website and mweb through Google Analytics, enhance the usability experience of the user, conduct surveys to find out the insight and the heuristics that travellers use to plan their vacation, do competitive analysis of the other market leaders, find out new ways to automate the various redundant processes, keep a close eye on the travel industry and incorporate the new trends, measure the effectiveness of the new campaigns. Practice School experience has also helped us become familiar with the working environment of companies. We also got an opportunity to interact with and learn from the experts who already have a lot of experience of working in industry. The constructive feedback from them has helped us in developing new skills as well as refining other skills. Hence Practice school has provided us ample opportunity to implement the techniques learnt in classroom as well as learn new concepts. I sincerely believe that due to this hands-on experience we are now better prepared for the future and experienced gained here will help in smoother transition from academics.

Radhika Gupta (2012ABPS668P)

I worked with Analytics team and the purpose of my project was to understand Hotels & Stays business vertical in HolidayIQ. It involved a lot of assignments aimed at determining travel trends among Indians in Indian destinations. The skill sets required for implementing the project were basic knowledge of Google Analytics and advanced features of Excel. I acquired Google Analytics skills on my own by practicing and by using online tutorials, whereas the tutorials provided on Taxila by PSD were helpful in acquiring the skills of Advanced Excel. PS2 was instrumental in providing holistic experience and industrial exposure. It was a golden opportunity to learn how E-commerce industries function. Having done projects for six months really gives you proper insights of the organization which is otherwise difficult to understand in two months internships. Interning at HolidayIQ in itself was another experience. It is a travel start-up and the work culture is great. The mentors are amazing.

Company: IDeaS-a SAS Company

Nishant Sharma (2012C6PS589G)

Revenue Optimization Android and Web applications are both games to check the optimizing skills of the Revenue Managers and to check the general analytical ability of a person in recruitment and to simply

promote IDeaS' optimizing capabilities. One can simply play with the application just by accepting the room bookings considering the rate and occupancy as constraints, to get the maximum RevPAR and Occupancy and can check their result with IDeaS. Java, Android development, XML, HTML, CSS, AngularJS, JavaScript, JQuery, JSON, Excel Solver Add in.Android Studio, IntellijIdea, Webstorm, MS Excel. Design and development of one Android and one Web application properly following UI/UX guidelines for marketing Revenue Optimization power of IDeaS- a SAS Company. In future, the application can also suggest the rates for a particular day and can be used as a knowledge to maintain revenue on daily basis. Using x API, we can also decide dataset depending on the user's efficiency. Application has also a scope of accepting Revenue on monthly basis.

Siddartha Peteti (2012C6PS595P)

The time spent here is fruitful and was able to learn a lot of things and played a significant role in preparing one for the industrial standards. It also prepares us to be comfortable in working with teams and under leadership. Practice school is necessary because it helps students learn new technologies and helps them get acquainted with industry standards. The 5 month duration of the Practice School provides us an opportunity for working on good and complex projects unlike summer internships. Being a product company working on Revenue management, you always get a chance to work on all aspects of software development. The management here is very friendly, helpful and always open to suggestions and welcome criticism. This is a good place for initial phase of industrial training and got a fun work place, focused on building a great product and a great culture with strong leadership. It also helps in maintaining work life balance and timings are somewhat flexible. It has a culture that fosters innovation, teamwork and professional enrichment. My project was to build a recruitment portal for managing recruitment tasks and generate dynamic reports for the HR department thereby decreasing redundant tasks. The portal generates some predictive analytic reports which helps the managers to review and improve their hiring process. The portal was built using technologies like bootstrap, JavaScript, angular, JQuery, Java, JSP, Servlets, Hibernate, MYSQL, and Junit. The domain of Revenue management is quite unique and interesting. This company is powered by SAS® and more than 25 years of experience, supports more than 7,000 clients in 94 countries and is relentless about providing more insightful ways to manage the data behind pricing and revenue optimization. This PS station is helpful if you are interested in working on Java technologies and learn new skills and technologies. They doesn't have any fancy stack and technologies used here are satisfactory.

Yagya Singh (2012C6PS872H)

The time spent here is fruitful and was able to learn a lot of things and played a significant role in preparing one for the industrial standards. It also prepares us to be comfortable in working with teams and under leadership. Practice school is necessary because it helps students learn new technologies and helps them get acquainted with industry standards. The 5 month duration of the Practice School provides us an opportunity for working on good and complex projects unlike summer internships. Being a product company working on Revenue management, you always get a chance to work on all aspects of software development. The management here is very friendly, helpful and always open to suggestions and welcome criticism. This is a good place for initial phase of industrial training and got a fun work place, focused on building a great product and a great culture with strong leadership. It also helps in maintaining work life balance and timings are somewhat flexible. It has a culture that fosters innovation, teamwork and professional enrichment. My project was to improve the testing automation of G3 application, a new and improved version of IDeaS's main application. The technologies used were like JavaScript, angular,

JQuery, Java, JSON, Cucumber, Groovy, Hibernate, MYSQL, and Junit. The domain of Revenue management is quite unique and interesting. This company is powered by SAS® and more than 25 years of experience, supports more than 7,000 clients in 94 countries and is relentless about providing more insightful ways to manage the data behind pricing and revenue optimization. This PS station is helpful if you are interested in working on Java technologies and learn new skills and technologies. I did some work on my own learning Hadoop and Hive, as IDeaS allows us to improve our individual skills. They doesn't have any fancy stack and technologies used here are satisfactory.

Sushant Dhawan (2012C6PS604G)

Being a product company working on Revenue management, you always get a chance to work on all aspects of software development. The management here is very friendly, helpful and always open to suggestions and welcome criticism. This is a good place for initial phase of industrial training and got a fun work place, focused on building a great product and a great culture with strong leadership. It also helps in maintaining work life balance and timings are somewhat flexible. It has a culture that fosters innovation, teamwork and professional enrichment. During my internship in the company I have been a part of the tools team where my project title was Enhancements to the SWB – Support Workbench, it is a monitoring tool used internally in IDeaS by the iCare, ROA teams. This is a web application which primarily monitors the functioning of the main IDeaS Advanced Revenue Management Solutions Application. I have written test cases in Cucumber testing framework for 'Business Status Board' and 'Favorite Query' functionalities, Junit test cases in Spock framework in Groovy Programming language for the 'Favorite Query' functionality. Developed a new end to end functionality called 'Custom Home Page' which lets the user choose and set his most frequently used page as his landing page on the SWB. I have also worked on and resolved all the Blocker and most of the Critical and Major Sonar issues in the tool's code. I have written a Message Utility functionality supporting Dynamic HTTP messaging. In my time here, I learned new technologies such as Groovy Programming Language, Cucumber testing framework, Spock testing framework, struts, JSPs, Servlets, the concept of Sonar Violations etc. Regarding the future prospects of my project, every functionality I have worked on has been deployed already or will be deployed in the near future and will be used by iCare and ROA teams. The domain of Revenue management is quite unique and interesting. This company is powered by SAS® and more than 25 years of experience, supports more than 7,000 clients in 94 countries and is relentless about providing more insightful ways to manage the data behind pricing and revenue optimization.

VenuKoushik Atmakuri (2011B2A4634G)

Working in world-leading solutions for 5 and a half months had a huge impact on my professional career. The time spent here is fruitful and was able to learn a lot of things and played a significant role in preparing one for the industrial standards. It also prepares us to be comfortable in working with teams and under leadership. Practice school is necessary because it helps students learn new technologies and helps them get acquainted with industry standards. The 5 month duration of the Practice School provides us an opportunity for working on good and complex projects unlike summer internships. Being a product company working on Revenue management, you always get a chance to work on all aspects of software development. The management here is very friendly, helpful and always open to suggestions and welcome criticism. This is a good place for initial phase of industrial training and got a fun work place, focused on building a great product and a great culture with strong leadership. It also helps in maintaining work life balance and timings are somewhat flexible. It has a culture that fosters innovation, teamwork

and professional enrichment. I worked on multiple projects in the Tools team, which are enhancements to existing products and developing new features like Scheduling, ForgotPassword and more. Software Development is not just about writing programs to solve a real world problem. The solutions provided by a developer must be readable, understandable and maintainable. By following the Object Oriented Design principles and techniques one can create applications that are user & developer friendly. Java Enterprise Edition (J2EE) was used as a development kit and MySQL was the relational database management system (RDBMS) used for web application development during the course of this project. In my time here, I learned to work alongside other people and learn the true meaning of teamwork. There are standups and demo days in which you can showcase your projects and ideas, and it's a wonderful feeling getting applauded from everyone and getting suggestions for improvements. The domain of Revenue management is quite unique and interesting. This company is powered by SAS® and more than 25 years of experience, supports more than 7,000 clients in 94 countries and is relentless about providing more insightful ways to manage the data behind pricing and revenue optimization. My major accomplishment here does not include any medal or certificate but the trust and confidence that everyone at IDeaS showed in me.

Company: IMI Mobile, Hyderabad

Samanth Chilukuri (2011B5A3495H)

During my practice school 2 duration at IMImobile, I have learnt a lot of things which will be useful for me at a later time. Learning curve I have made here is not about gaining knowledge of new software technologies and tools. It is about building interpersonal skills and understanding how to sustain the business and ironing out the troubles faced during the journey. I understand many issues can be sorted if proper communication is present among people of team. The people around me in the team I was allotted to work are friendly and approachable to ask anything. When I came to this company I have no basic knowledge of the technology and software they use, the mentors have helped me understand and gain deep insights in to it. The people in my team enjoy the work they are doing and when you enjoy anything it will be fun working with them.

Pavan Kumar (2012AAPS036H)

During my internship at IMIMobile I understood how an organization works at different levels. I have made new acquaintances from whom I learnt bot technical and personal skills. I have been assigned projects in programming domain through which my overall coding and debugging skills have improved. I have developed websites and some other scripts in Java collaborating with the employees at IMIMobile who helped me to solve and learn many issues with the softwares I develop. This internship helped me a lot developing my personal and technical skills.

Rishiteja (2012A3PS302H)

The Overall experience at IMImobile, Hyderabad was good. The internship here was a useful experience. I have gained knowledge, skills and met new people. I got insight into professional practice. I learned different facets of working in an organization. I experienced that managing operations, as in many

organizations, is an important factor for the progress of projects. As a part of my job I got an opportunity to meet with prominent personalities in the corporate world and it helped me stretch my boundaries of understanding and Strategic planning. I would like to thank BITS Pilani for providing me with this opportunity and our PS Instructor Mr. T.V.Rao for his guidance & support throughout my internship.

Company: InsideView Technologies, Hyderabad

Archita Sahu (2011B1A7706H)

My work at InsideView was about back-end application development. This involved building RESTful web services using the Spring Framework in java. It was a very good learning experience; I have learnt a lot of technical stuff and done the same work as would a SDE1. I highly recommend this company for PS2 to everyone who wants to have a good technical learning experience. The people here are friendly and helpful; interns are treated the same way as full time employees in terms of the work given.

Pradyumna (2012C6PS947H)

In this extract I will be talking about my experience at my PS station, Insideview Hyderabad. Here I will talk about all the various positives and negatives from my experience at Insideview and my advice for any future students at Insideview. Let me start of by talking about the plus side of my Internship and share some positive experiences from my time at Insideview. My project at Insideview was to rewrite and remodel the insideview indexing code and explore the possibility to deploy this code on spark. In this project I got to learn a lot of new technologies. Spark, Storm, Elasticsearch, Lucene, Hibernate, Maven were just a few of these aforementioned technologies. I relished the chance to learn all these new things as you are not afforded this opportunity in most PS stations and it will be very useful to me in the future. The work culture and environment is also very friendly and open. There is daily communication between all the members of a team. All of my team members were very welcoming and it was very easy to integrate seamlessly into the team. The work hours are also flexible and they allowed us to work from home if we needed to. We also had two team outings to Leonia and Wonderla which were also very enjoyable. I was not looking for a PPO during my time there, but I was told that if you do a good job for your team then there is a good chance that you'll be given a PPO. Now let us move on to some of the negatives during my time at Insideview. Firstly the project description given by the company for the projects here is not entirely accurate. In the description it was mentioned that the projects would be related to the fields of Data Mining and Information retrieval, but this was not the case. Only one out of the three projects was related to Information Retrieval. Therefore if a student is looking for a project related to Data Mining I would not suggest that they go for Insideview, as there is no guarantee that a Data mining project will be assigned to the student. Another minor complaint that I had was that my mentor was very busy so there were times when I had to wait for long periods of time for him to check and approve my work. To conclude I would say that my overall experience at Insideview was a positive one.

Company: MathWorks India Private Limited, Bangalore

Bhavesh Bhatt (2014H140033G)

Adaptive antenna arrays use multiple antenna elements to form directional patterns in order to improve the performance of wireless communication systems. The antenna arrays also have the ability to detect the direction of incoming signals. These two capabilities allow a smart antenna system to adaptively beam form to more efficiently communicate between nodes. The direction-of-arrival estimation is a crucial component of the smart antenna system. Historically this estimation has been accomplished using a personal computer. Implementing the estimation in the digital domain has the potential to provide a low cost and light weight solution due to recent advances in digital integrated circuit fabrication processes. Furthermore, digital circuitry allows for more sophisticated estimation algorithms to be implemented using the computational power of modern digital devices. The ultimate goal of the project was to design a model which can be implemented in a target device. My project presents the design and prototyping of direction-of-arrival (DOA) estimation for a smart antenna system first simulated on MATLAB and later a model was created using Simulink. Additionally, the developed Simulink model was redesigned from scratch to make it compatible for HDL code generation using HDL coder.

Nikhil Vyas (2014H103022G)

This project aims at the modularization of Simulink Mask Editor. The current implementation of the Simulink Mask Editor is done considering all the tabs are to be used inside the Mask Editor only. However, as the software is expanding the need to modularize the Mask Editor code arises. The Simulink Mask Editor is implemented in C++, Java and MATLAB. The code for different modules of the Simulink Mask Editor is tightly coupled. The ultimate goal of the project is to make the individual modules of the Simulink Mask Editor pluggable components which could be used elsewhere in the entire software without any dependency to the Mask Editor. This presents a significant challenge as it was not designed to work in such fashion. The work included collaborating with multiple teams across the organization to test such a use case where the pluggable component would be used. It also involved development of an internal-use API so that other teams would be able to use the component easily without digging into the code. The ultimate by-product of the plug ability requirement for the individual modules resulted in a much more modular code for the Simulink Mask Editor, hence the project was titled as such. Additionally, the project required in-code documentation and maintaining an internal Wiki page to provide a central information resource / technical details / status of the project. No additional test cases were required as the already existing test cases would be sufficient to check whether the Mask Editor retains its original functionality.

Aiana Goyal (2012A1PS530P)

NextGen PMS is a corporate social responsibility and sustainability consulting company which provides a platform for reporting CSR and sustainability tasks for other companies. Currently, the company works with more than 100 companies (including Fortune 500 in 22 sectors) and manages more than USD 125 million of CSR/ development capital annually. There is no single project where we get to work. NextGen provides the opportunity to interns to work on several CSR projects at single time. My first CSR project was company's first project with non -profit organization, Art of Living. Since then, I have been working with different consulting managers of the company Basic Excel and Report Writing- for consulting profile; HTML and JavaScript- for coding profile are the basic skill sets required for implementing CSR projects. After undertaking several projects which mainly involved working on Excel, I found that the repetitive tasks on Excel like filtering, copying and pasting can be automated by writing macros in Excel. So along with my project work, I learnt Visual Basic. I also gained experience on the p3 platform of NextGen PMS

and how it can be used for reporting purposes. Along with all of this, I also learnt coding language (HTML and JavaScript) for making dashboards. After studying Chemical for entire 3 years, NextGen provided with a new experience in consultation profile. Though it was not exactly consultation which I did, my basic role was handling data for different projects like sanitation project of Art of Living. The responsibility of handling entire data and making it run successfully on dashboards, gave me immense confidence. I also learnt how to work alongside other people and learned the true meaning of teamwork and how important colleagues are in an office space. My mentor and seniors here always provided me with right amount of help, not too much but just enough to set me in a path to self—discover the solution. I have realized the importance of proper documentation, efficient team management, work delegation and follow-up, and presentation delivery to the corporates.   NextGen helped me to build my persona, knowledge base and interact with industry experts. The experience here if not affect my future career prospects - has at least made me aware of the current industry standard and situation and that adds to better chances at scoring a workplace.   Also, NextGen gave me the chance to explore so many fields like consulting, business development, marketing and technical field (which involved coding). To conclude, I would like to recommend this place as an option for all Engineering students who want to experience working somewhere you will feel independent and important.

Akanksha Agarwal(2012A2PS474P)

I wanted to leverage the PS 2 opportunity to gather experience in the field of consulting and NextGen, being a pioneering startup in the CSR & Sustainability space, was a right fit because: The fast-paced environment gave me enough scope to experiment and gather fresh perspective about the issues in development sector The projects I undertook gave me a lot of exposure in end-to-end program management and client-facing consulting role During this internship tenure, I worked on a total of six projects out of which two are impact assessment projects, in education and livelihood sector, which required a week-long field visit each. I was sent for the first on-field study to Betul District of Madhya Pradesh on the first weekend itself. This helped me quickly pick up skills of multi-level stakeholder management, data collection and analysis, and reporting of findings. Soon after this came another requirement for which I was stationed in Dharmapuri District of Tamil Nadu wherein I implemented the learning gathered from the previous experience. All this while, I was working in a small team with strict deadlines and interacting with the top leadership of the client team. Getting entrusted with the client-facing role so early in this internship helped me steer dynamically and towards a better experience. Owing to this experience, my thoughts about the development sector have evolved and this firmness to the thought process reflects in discussions that I engage in. I am now able to better understand the issues that I read up about in newspapers and magazines and think through them from different dimensions. This PS 2 experience has been an important milestone in shaping my skills as well as approach to the issues in development sector.

Giriraj(2011B1A4697G)

NextGen is developing a p3 platform to help companies monitor CSR activities. As part of this platform, dashboards are made using HTML, CSS, Javascript, jQuery, Bootstrap. This enables the client company CSR teams to monitor and assess the impact of CSR activities undertaken by them. The p3 platform as a product is being developed using Angular js, Node js. The skill set required for the project is hands on

experience on various Web Technologies. I learned Javascript technologies from online tutorials and Mozilla Developer Network. The key learning experience was that I learned how to handle high profile project with a tight deadline. I gained hands on experience on web technologies. I learned efficient ways of business communication.

Shubham Maurya (2012A4PS430P)

I would like to start with a brief overview of my work during these fruitful 6 months of Practice School -2. As a part of the Business Development Team of NextGen PMS Pvt. Ltd., I've been assigned variety of projects. Fulfilling the role a Business Analyst Intern, my projects range from the field of education to the actual field of cricket. There were field visits as well as meetings with high profile corporates in their offices. Sometime, I have to do the data crunching based on the previous team discussion sessions while at other times, I have to brainstorm with the team to come up with ideas meeting the client's demands. Moving on to the skills required for the project implementation. Basically, apart from the soft skills nothing much is expected from the interns. As a part of the project, few things will be expected from the interns, but before that, sufficient background details are also provided, which at the end of the day, help in keeping up with the pace of the projects. But it's totally on us, how we grasp it and bring it into practice. For instance, at some point of time, it will be required to work on their proprietary software and for this, proper training will be given. Directly or indirectly, the analytical and creative way of thinking comes handy in carrying projects from the planning phase to the closing phase. Apart from this, it will be better to have a hands on Microsoft Office components like, Word, Excel and PowerPoint. Almost every day, these tools occupy most of the time when it is not the brainstorming sessions. So, one may ask, how to hone these skills. The answer is, it happens in two ways. First, as an engineering student, it is quite common to have a healthy interaction with tools like MS Word and PowerPoint, and apart from that basic knowledge not much is required. Talking about the second way. Here, the PSD (Practice School Division) comes into picture. The PSD has taken great pains to prepare a small module for the interns at this station. It was a more than enough mini-course on MS Excel, which came handy in learning the crucial components that are required in few of the projects. I can say that I've learnt many things during the period of all projects. I have gained in-depth knowledge about different kinds of sectors and associated strengths and gaps. Experiences that I've gained here ranges from making field trip to small districts to having meeting with high profile corporates. The journey has so far been filled with many opportunities to learn and face, whether it is the skills for efficient team management, reporting or ways of effective work allocation. I sincerely believe that due to this hands-on experience I am now better prepared for the future and experienced gained here will help in smoother transition from academics to the professional life.

Company: Opera Solutions, Noida

Aviral Gupta 2012A7PS160H

At Opera Solutions, I have helped in delivering a critical project for the company. The project included a backend in Spring and Java and frontend was developed in JSP and JavaScript. I got to work on various new and standard technologies such as Java, Spring, JOOQ and many more. The skills required for the project were coding in Java, Spring, JavaScript and MySQL database. The basic understanding of programming and working for database in BITS Pilani was instrumental in learning these skills quickly. I was very fortunate to have mentors who helped in learning them. They also aided me in adapting to the corporate world. The experience at Opera Solutions was very helpful as I learned new technologies. By

working in a critical project meant that my code would go into production, this boosted my confidence in myself and also made me responsible for my work. Practice school experience has also made me familiar with the required attitude and working conditions in the modern information technology industry. The constructive feedback of my mentors and manager has helped to learn new skills as well as refine my existing skills so that they become valuable to the industry. The experience of practice school has helped in understanding the importance of various subjects taught in the college as I was able to implement them. Thus, I believe that the practice school has helped in our transition for academics to work. I was applauded by my manager for my work as it helped him in delivering the phases of the project on time.

`

Abhinandan Sain (2011B2A7743P)

I interned at Opera Solutions during my PS-II. I worked here as a part of software team that develops custom data solutions for the clients. Past five months have been an amazing learning opportunity for me. I was introduced to various programming as well as operating systems concepts and was provided with a platform to implement those concepts. Major chunk of my project involved modifying a software solution to display the trip narrative for a popular airline company. For the implementation of the project, I had to learn various concepts of data manipulation framework developed by Opera and some basic knowledge of shared libraries and architecture of python language. Apart from this I also learnt various aspects of data processing specific to the software development side of data management. These data processing functionalities included filtering, deduping, joining, derivation, grouping, binning of data. As part of another task I have worked on managing the delta to support the existing production code. This task helped me become familiar with basics of the code developed for the entire project. It also introduced me to various development and data handling strategies. Apart from learning various software related concepts, I have also realized how working in industry is different from academic projects. In industry there is a lot of emphasis on correcting the corner cases associated with a given program. Also, the programs are subjected to large number of stress tests so as to make them as bug-proof and future-compatible as possible. The programs are also reviewed by a large number of people to reduce possibility of bugs. Moreover, even while writing a program, a lot of emphasis is laid on making it easy to read, understand and manage. These kinds of programming practices are very typical to the industry. Practice School experience has also helped me become familiar with the required professional attitude and the working environment of private companies. I also got an opportunity to interact with and learn from many professionals who already have a lot of experience of working in industry. The constructive feedback from them has helped me in developing new skills as well as refining other skills. Hence Practice school has provided me ample opportunity to implement the techniques learnt in classroom as well as learn new concepts. I sincerely believe that due to this hands-on experience I am now better prepared for the future and experience gained here will help in smoother transition from academics.

Sakshi Saharan(2012A7PS150P)

Practice School is the perfect opportunity to put all the theoretical knowledge to practical use. My experience has been a great learning experience. Opera Solutions is a cutting edge technology firm dealing with Data Analytics and Machine Learning Applications to diverse business domains like healthcare spend intelligence, banking, aviation etc. The company represents the right balance of technology and services

in an intensely competitive yet healthy and nurturing environment. The experience became particularly rich because of a flat hierarchical structure, enjoyable work environment, supportive management and motivational peers. Even though the company is well established in the niche area of big data analytics and has a wide global imprint with a talented pool of employees, it continues to have a start up like culture encouraging independent entrepreneurial thought without compromising on accountability. The particular project on which I was staffed, involved working on C and R. This experience has indeed helped me in developing an in depth understanding of the corporate world and one cannot ask for a better start to one's career.

Company: Oracle Financial Services Software Ltd, Bangalore

Ishaan Rachit Dwivedi(2011B2A8626G)

I interned at Oracle Financial Software Services, Bangalore. I was part of the Limits & Collateral Management team under Oracle Banking Platform division of OFSS. So, I got an opportunity to work with diverse toold in testing like JUnit testing, Code Coverage, and SUnit testing. This really helped me expand my knowledge base and deal with different technologies. Most of the teams at OFSS OBP use Java as their programming language. So my java concepts became really better. I also got a chance to work on proprietary softwares of Oracle.The experience at OFSS was really great. I think I got a good exposure of the work culture in an IT company catering to IT needs of financial conglomerates. The seniors at OFSS were really helpful and put a lot of focus on basic technical concepts. As an intern, I was always asked if I was happy with the work given to me and I made sure I benefit from it. Overall, it is great place to learn without much work pressure put on you.

P.Pruthvi ranjan reddy (2012AAPS026H)

In OFSS,I was part of the Oracle Financial Services Analytical Applications Infrastructure. Being a part of this I was exposed to a whole new concepts of Interface development,new concepts like metadata and was able to learn many tools which are specific to the organization. My knowledge in IT field is significantly increased when compared to the beginning of the PS. My work involved concepts of JAVA,JS,HTML and SQL, the project was R&D oriented, the goal was to upgrade and improve an existing product of OFSS. I got to understand IT culture, the sophistication of the organization, co-ordination between different teams to achieve something and team work. Senior employees in OFSS were very helpful and my mentor made sure I was in the right path of learning, he was very patient with me for the whole duration of PS as I had very weak basics in C.S topics. Work pressure was very minimal which made the whole experience comfortable for learning.

Company: Oracle Financial Services Software Ltd, Mumbai

Ruchika Verma(2011B4A7633H)

My experience at Oracle Financial Services System has been a good learning experience and exposure to the technical world. I have been a part of the CLOUD team in the Research and Development department for the last 5 months where I developed a Cloud Installer that did an automated setup from scratch on any worker node so that Bank transactions could be done. This is the very first version of the installer and

within few more months of work on this, it will be sold to the Banks. Languages like Ruby, Chef, Java, Unix and python scripting commands and DBMS query commands were required. I acquired the skill set on-the-go while working on the project and the CS subjects helped in building the base. I have worked on python installers and directly worked with the Oracle Database along with various Oracle proprietary softwares. One main thing that I learnt while interning is that google is your best friend. Along with the knowledge you get while studying for your base courses, while on the job, you should have a good habit of googling first and then asking for help. Luckily, my team was very supportive and taught me their technologies from scratch but then after your first 1-2 months, you are required to start finding solutions and developing on your own with slight when necessary help from the mentors. But once you start working on your own, you develop a good amount of self-confidence which I believe is very important.My working hours ranged from 9-11 hours. The work environment was good and people utmost helpful when needed.This experience provided me with a taste of what is to come when I join the working world.

Praneeth Varma(2012A3PS303H)

My PS-II station is OFSS Mumbai. I have been working here as a part of Automation team. Past five months have been a good learning opportunity for me. I was introduced to various programming as well as software related concepts and was provided with a platform to implement those concepts. For the implementation of the project, I had to learn various concepts like Linux commands, chef-solo, programming in Ruby. Initially when I arrived, I was a little scared and unsure of my role here and had no idea about coding. But once the work started, I slowly got comfortable. I got a week to prepare and got used to all the required concepts. No one told us where to find a solution a few times only that we had to find one. And this was the biggest factor in helping us transition from Academic Learning to Industrial Application. Apart from learning various software related concepts, I have also realized how working in industry is different from academic projects. Practice School experience has also helped me become familiar with the required attitude and the working environment of companies. I also got an opportunity to interact with and learn from mentor and my manager who already have a lot of experience of working in industry. The constructive feedback from them has helped me in developing new skills as well as refining other skills. Hence Practice school has provided me the opportunity to learn new concepts. I sincerely believe that due to this experience I am now better prepared for the future and experience gained here will help in smoother transition from academics.

Company: Oracle India Pvt Ltd, Bangalore

Prabhdeep Singh Walia(2012A8PS255P)

I completed two projects during my five months at Oracle Bangalore. The first project dealt with generating automatic documentation for various REST projects. This project needed a bottom-up approach as documentation was to be generated for pre-existing projects. For this reason, Swagger was chosen. Swagger is easily integrated with JAX-RS projects. But default Swagger tool works on special Swagger annotations, not very helpful for already existing projects. Further research into the topic yielded a tool called JAX-RS Analyzer. This particular tool was available as a maven plugin, so could easily be added to existing projects. It analyzed projects at the bytecode level and generated not only Swagger documentation, but also Plain text, HTML, ASCIIdoc documentations as specified.The second project was to automate two commonly employed processes by users employing ApaaS services: zip up and upload

application to Cloud storage, and to deploy the application from Cloud storage to Service. Maven was a natural choice as it integrates easily with Java projects. It was decided to create two Custom Maven Plugins for the task. Worked on learning Mojos and Maven. Understood how Cloud storage and Container services are integrated, and how to exploit this connection to complete the task at hand.Skill sets required for the projects were: REST Architecture, JAX-RS Analyzer, Swagger, Maven, Cloud Computing. Since I had a good programming experience, albeit in C++, working in Java was no issue.Rest of the concepts are acquired on the job itself. Learn as you go. There is not much supervision in this particular department of Oracle. Lack of a mentor limits one's options when it comes to sources of learning. So I needed to search and read through various blogs and papers to learn any new skill set. Manager was also unavailable most of the times, so there isn't anything in the name of supervision or help.Take-back from PS-II experience: PS-II is an amazing opportunity to learn how the industry works, and various standards and procedures used in the real world. What is really important is a mentor to help through the processes and with new concepts and tools. Someone with an experienced insight into the industry by the lieu of working in it for years. It takes a lot more time and effort, with determination to learn and grow, to successfully complete projects at such a scale without supervision.I was able to learn a lot of new concepts and standards, maybe not as much as I hoped or expected to, but overall it was an enriching experience interning at Oracle.

Sourabh Kumar Tiwari (2012A8PS281H)

PS experience was very good in terms of learning new concepts. The time spent at PS-2 has been a great teacher in various spheres, including but not limited to understanding corporate life, expert guidance, apprehending new technologies and their developments and building a character. The training holds a lot of scope on a significant scale. One is expected to learn, work and develop on new technologies applying one's university education, which is, in itself, a mammoth task to achieve. For starters, it has made most of us early risers unlike the lazy slobs we were at college. Yes, academic experience is necessary, but the industry is a different ball game altogether; and PS2 provides a perfect opportunity to learn and acknowledge the differences. It all boils down to deadlines and work, but challenges are interesting too. Employee experience is great; and it helps build the initial industry contact base for future prospects. Things taught in college are just not enough. The industry is working on feats that are a century ahead of what is taught as academics. Sure, the basics are still the same; but constant learning is not a myth- it's the very reality we exist in and PS2 has just been a reminder of the same. Books, Internet and guidance or expert advice – as you may call it. Recommended books by your team are a necessary read. The initial two-three weeks in the company are all study no play, but that is exactly what sets a tone for the next five months at office. I learned a lot from browsing the internet. The amount of knowledge base on the internet is beyond tremendous and almost every troublesome aspect of books is explained in the simplest of terms. While there was limited material related to my project, the basics were still all there. Finally, a human touch to all of it is necessary. Helpful mentors make the cut here, and almost all the seemingly unresolved questions find answers with these people. Etiquettes are rarely taught by books and internet. PS-2 helps one to build their persona, knowledge base and interact with industry experts. The experience at PS-2 - if not affect my future career prospects - has at least made me aware of the current industry standard and situation and that adds to better chances at scoring a workplace. I have successfully completed two projects – PhoneHome project and Uninstall Feedback Email Transfer Module. There is some work left in third project Submitter information project that I will complete before the PS2 ends.

Company: PAYPAL, Bangalore

Nikhil Parasrampuria(2012A7PS084G)

The overall experience at PayPal Bangalore is good. 5 months is a lot of time to spend at a company. You get to see the overall culture and business goals of the company. There were a lot of talks organized in PayPal to explain about the various products and services of PayPal. We also had an Off-site Intern Connect event organized in Chennai. The event a mix of fun and information. Various leaders of PayPal had assembled to give an insight about the current business goals as well as the future plans of the company. In my case, I was a part of the Consumer Engagement Platform and was developing a tool for offer Management which will allow all the Marketing managers to create various offers to be used by PayPal. The project involved learning new technologies like Elasticsearch and Spring framework. The skills set were acquired using various internal resources of PayPal and some resources shared by my team members. We developed Java RESTful services for the same. In my case the product was a relatively new product so I was also involved a bit in the designing process. But a new product has its own limitations. A lot of time was wasted to come up with the exact specification and requirements. Overall it was a good experience as I learnt a lot and also improved upon the things that I already knew. One advice would be that when you are working on something try to understand the extent of impact your product will have on the business, it helps in the development process and also in the overall understanding of the project. There were a few hackathons held during the period of our internship. These hackathons offer an immense opportunity for learning. I along with 2 of my team members won one hackathon and we were given cash prizes also.

Shah Mit Kalpeshbhai(2012A7PS214G)

My overall experience at PayPal was excellent! When I joined here five months ago, I was completely new to a Software Engineering company. I had no previous experience in this domain. So, I had to learn quite a few things initially. Starting with Agile Framework, I got to learn various technology including Spring framework, Maven, JavaScript, Node.js, Web Services (REST and SOAP), etc. Also through out the internship, we were using many PayPal specific platforms to get our tasks done. It was also a totally new learning point of us. Though these type of platforms, vary from company to company, we realized that their purpose will be more or less similar. With a great support and guidance from my team, I was able to learn them and use them efficiently according to requirements. Apart from learning the technical part, we also learnt about how a company board plans their higher level goals and how they are implemented by various directors, managers and employees in a top-down fashion. We also had an interns offsite at PayPal's Chennai campus, where we learnt various aspects of corporate life, culture and business goals here at PayPal. I was working with Merchant Onboarding team. My team mainly focuses on helping Merchants onboard through PayPal platforms via Partners. Partner uses a GET Status API to get various information about merchants like their products, permissions, credentials, etc. These service calls were being executed in serial, because of which its response time was as high as 1.6 sec. My project was focused on parallelizing some of the service calls and reduce the response time as much as possible. After using PayPal's DGTask Executor framework to parallelize tasks, we did Load & Performance Testing to measure the performance of the modified code. After doing scalability testing and long duration testing, we finally came to know that response time was reduced by 37%, while keeping the System CPU Utilization same and an increase in TPS from 20 to 31. Afterwards, code was sent for production. Apart from some basic skills required, tools required for this project were mostly PayPal specific. PayPal has its own documentation of all the technologies used by it – 'Confluence', and I mostly used that to learn those

tools. Also, whenever a clarification was needed, I used the question-answer forum maintained by PayPal – 'AnswerHub'. Apart from that, team members were always more than ready to help. One thing I learnt from this experience was, the way we approach the problem and skills required for the same are quite different in corporate life from that we learned in the college. And as we were told in the introductory presentation of PS-II, it truly served as a bridge between the college and actual work places. I am grateful to BITS for providing me this excellent learning opportunity!

Company: PayPal, Chennai

N Rajeswary (2011B4A7637H)

The Practice school program of BITS completes the courses learnt in College, by supplementing with Industry exposure. As an intern at PayPal, I got to work with some of the brightest minds in the industry. It exposed me to the culture of software companies and gave me an opportunity to learn and understand the latest industry trends. I have been working with the Release services team of PayPal for the duration of my internship. My project was to develop a customer interaction tool for release services. The team owns a self-serviceability portal named Armor. To add to Armor, I developed a tool named, JIRA based release status tool, which serves as one stop shop for customer of Release services, which provide End to End release processing status for a JIRA ticket. The development of the project was done in Node.js. I learnt web application development from scratch. I was given sufficient time to learn the basic concepts of web technology, before the start of development. I was provided with freedom to implement my own ideas too. In addition to my project, I also learnt about the process involved in pushing code live to Data centers, the way data centers and load balancer works. The internship also helped me gain insights into Site reliability engineering. In addition to technical aspects of my project, I also learnt about Software development life cycle, waterfall and agile model of Software development, role of a developer and tester, how the organization is divided into business units, how these units interact with each other in an organized manner, to produce something massive. In PayPal.special events were organized for Interns, to bring them all together as a group. The university programs team provided us with opportunities to interact with the leadership team and with recent college graduates. Near the closing of Internship, interns were provided with opportunity to showcase our work in front of the entire organization. Interns were given importance and were encouraged to come up with new initiatives too. I also learnt that communication plays a vital role at team level and also at an organization level. I gained knowledge, contacts, experience and most importantly confidence.

Talluri Swetha (2012A7PS138H)

PS-II as such being a wonderful program proved to be wonderful for me once again here in PayPal Chennai. Things learnt here are many. But I can mainly categorize them into two. One is, technical aspect of it and other being personality building in an IT sector. One of the projects I have worked here is on developing a Rest Service. Me being new to what a Rest service is I need to learnt it through some video tutorials and with the help of my mentor got things familiar about how to start with a rest service . This service would help improving query performances on particular data these people use here . We try to archive some of the data from production DB to a data Warehouse thereby improving the performance of the queries. Hope I contributed something useful to the company through this project . And the second project I have worked on is developing a tool to help developers face live issues. It is an entire C++ project. This tool would reduce the time taken by developers in solving live issues . Proud to be a part of these projects

which would help my team. And coming to other part of learning regarding personality development, learnt a lot from my team people here. The way they receive new people and the way they help each other at times of difficulty. The way they learn from each other irrespective of their designations is something which is really amazing. It was a feeling of equality among all of us here. So it was that which made me feel comfortable gradually. And as such work culture here in PayPal was awesome. Even we had deadlines all of them are according to the individual convenience. Nothing would be beyond an individual capacity. To conclude, I would like to recommend this place as an option for all computer science and IT students who want to have a good experience of working somewhere you will feel independent and important. Our sincere thanks to PS division for this opportunity and good luck to the student readers.

Company: Sabre Holdings, Bangalore

K. Ashmitha (2012AAPS088H)

I got the opportunity to work on big data technologies to develop a recommendation engine for GetThere, Sabre. The team is very helpful and the work is very interesting since I got to work on many new technologies. I got introduced to agile methodology of sdlc which gave me the exposure of project - sprint planning and estimations. Overall it is a good experience in sabre. You get lot of exposure of the company and also corporate work culture.

Dharmana Priyatham (2011B3A3401G)

I have worked at Sabre Technologies, Bangalore as an intern with the Self-Service Checkin team and my overall PS2 experience was great and more than anything that I expect from a PS station. I was not just well trained technically but was also exposed to the high working standards of the company, the highly qualified and experienced employees. My work here is to write automation tests for the JSON services which is going to be launched soon to various airlines. As a part of my internship I worked on iterations testing, regression testing and the refactoring of over 200 test scripts. The same required knowledge in Object oriented programming and REST APIs, about which I was made to learn with a proper guidance from my team members. All the employees were very friendly and were ready to help me in all the possible ways. I also had access to the weekly meetings of the whole team where my suggestions were welcomed. So I would say this is a very huge opportunity which will not just add to your resume but also to your professional life going forward and I feel fortunate to having experienced it.

Harshvardhan Gandhi (2011B2A8641G)

My PS2 station is Sabre Holdings, Bangalore. Being a dualite, I have extended my internship in Sabre after the first semester. So I've been working in Sabre as a software developer for almost 1 year now. For the first semester, I was working with the AirVision Cargo Revenue Manager team. Major chunk of my work in this team was based on adding new features to the Cargo Revenue Manager application for Lufthansa. While working on these enhancements, I learnt Struts, which is a standard framework for creating web applications and got a good exposure to JSP, Java and SQL. For the second semester, I got the opportunity to work with the GetThere team in Sabre. We had the task of building a recommendation engine for GetThere from scratch. Big Data Analytics in Hadoop was used for this purpose. Since big data was a new technology for me, every day was a new learning. While working on this project, I not only had a decent

exposure to various technologies in the Big Data ecosystem, but also learnt the role that Data Analytics can play in solving real life business problems. Being from a non CS background, I did not know many technologies before joining Sabre. So while working on live projects here, I've got a decent exposure to Java and certain technologies in the Hadoop ecosystem. I have also learnt the agile methodology which is used for software development in most of the companies.

Pratiksha Shukla (2011B3A8327G)

I have almost completed 11 months of internship at Sabre. I did my both internships two different teams. I started as Java developer and ended up with data analytics. This overall experience at Sabre has been amazing for me. Work culture is great. If you have passion to learn new things and specially if you are a beginner in coding, this is the place to be at. In my first semester, I worked with GetThere Team. Before filling up PS2 preference form, I was pretty confused on what kind of PS to prefer. I took decision to try out IT industry in my first semester and I ended up with getting Sabre. All I knew before joining Sabre was just basic programming in C (Syllabus of course CP). I was lucky enough to directly work with Principal Architect of team for an innovative idea. Objective of the project was to monitor the quality of new code entering the repository. I was given a week or so to learn Java as this project was based on core Java Development. It gave me exposure to many things including how to connect to the database, how to make API requests through Java, how to use collections effectively. The application dealt with two Main APIs, SVN and Sonar. The project consisted of both research and implementation and had multiple versions. When application was completed and tested, I was asked to expose it to a web service using Spring Framework. Next we created a Dashboard using Node.js and several web technologies like in order to display the results with Diagrams. At every stage, I gave demo to Managers, Developers, QA team etc which gave me a lot of confidence. Also I got a chance to develop something from scratch to the phases of testing and deployment. It was truly an awesome opportunity that I got. A new and first team was being formed at Bangalore office for Data Analytics. During the Global Hackathon Competition, I had built a small flight recommendation engine. This is when I was introduced to Big data and was immediately fascinated to the advanced technologies. I started learning things on my own and coincidently happened to be part of this new team. The team mainly focused on initial stages of Data Analytics which is capturing data and organizing it in Hadoop so that it's easier to process the data in future. It was a great exposure to learn Hadoop and its various components. I got to work on Map Reduce too for different use cases. This team strictly followed Agile Methodology for development cycles and I happened to be the first developer in the team. Until QA or BA joined our team, I got an opportunity to play multiple roles in the team. There was also some work in Java to refine the data before pushing it to Hadoop. I got to learn about Hive, Avro, Parquet, Spark and Talend. Initially work was mostly POC type. By the end of the term, we started dealing with PROD data. It was quite enriching experience and I would be continuing as full time employee in the same team. It helped me figure out my passion and shaped my career path. I would like to thank PS division, Preeti Ma'am and My mentors at Sabre for constant guidance and encouragement. Highly grateful!

Rajat Kapoor (2011B4A3594G)

I have worked with Sabre Travel technologies as an intern for an year now. I have worked in with the Airline Ticketing QA team, but on asking I was assigned development work. My tasks involved creating a tool for the team which assisted them with their testing tasks. This tool was basically a web app based on

the python Django framework. Though I was allotted this work, mostly the other interns in my team did Automation testing only. The technologies used by the company are mostly legacy, but I was allowed to use technologies of my choice as I was not working in any specific team and because my project was an individual one. You will be expected to attend weekly meetings, daily standups, , sprint planning, etc. which will help you attain concise knowledge of enterprise level planning and application lifecycle management paradigms. From the standpoint of technological learning, it depends a lot on which team you are allotted and what project you are working on. In case you don't like your work a lot, it is quite easy to get your teams changed. The work life balance is amazing, with flexible work timings and supportive management.

Company: Sokrati Technologies Pvt. Ltd, Pune

Siddharth Dixit(2011B2A4805P)

As my first full fledged professional experience, the work I was able to perform in Sokrati by being in a double PSII program has greatly helped me in growing in all directions, not just professional, but social and dynamic. I started off by researching into Mobile Deeplinking, a new phenomenon which was yet to properly take off, and documented the possible prospects of imbibing it into the Ads field. Even though my project didn't last long, it taught me a lot about how to approach other start ups, look into technical specifications of new emerging technologies and strike up a practical approach to a new possibility. My work had shortly moved to working on Google Adwords and optimizing both Search and Shopping campaigns. This involved weeks of learning about how ads work, various components such as Campaign, Adset, ad settings and how we could tweak them to try and obtain better results. It took a bit of time but I can now proudly claim to be able to launch all kinds of campaigns in Google Adwords. The same course of action (learning, practicing and experimentation) was followed up in Facebook as well. Performing A/B tests among others (such as time based, alpha tests, etc) really helped me gain a practical sight into how optimization for any processes can be done. Given how important Google Adwords, Facebook Business, and as an extension, Google Analytics are for any Ecommerce or scalable business company in the market, I am glad to say I've had a fair share of learning in all three tools and their usages. Not just the work, being a cog in a team, absorbing Sokrati's amazing culture and learning how to act in both stressful and calm situations has taught me a lot about how to deal with real life circumstances. I am glad to have been given this opportunity through my PSII program.

Behara Sai Prasanna Sowmya (2012A3PS222H)

My experience at Sokrati was quite a pleasant one. The working environment and the employee – intern relationship were commendable and are definitely things to be mentioned explicitly. My time there completely transformed my theory backed mind in to a more practical one. I have got a great knowledge of digital marketing world and criticalities involved in it and major players in this market. I got a greater insight of how advertising is done across the channels. I had to always take the worst case scenario and make the campaigns for advertising. My work is with the Channel Intelligence department. My work is mainly based on Coding and analyzing the campaigns and launching campaigns for advertising on Google and Facebook. I had a chance to learn coding and also work on Google Ad words Editor and Facebook Business Manager. I must say that these 6 months really helped me look beyond the academics, made me more result oriented and taught me how to get things done in a short period of time. The PS experience will definitely augment my future career prospects because now I know the skill set required by those

companies and I will be able to develop them. Getting to learn about the company culture and etiquette is yet another bright side of my time there.

Lavish Motani (2012A8PS314G)

PS2 has been a great learning experience for me. It was a stark shift in terms of the quality of work required from academics to professional work. Sokrati being a startup the work culture is very informal and the people around are very helpful. Also, they also give you plenty of opportunities for you to switch team if you feel like you want to learn something new. The work might get hectic but the learning opportunities are also immense. Also, the mentors are there to help you out every step of the way. I was initially a part of the sales team, researching and prospecting for new client, generating leads. Then I was shifted to the marketing team. It was a newly formed team and hence was able to learn alot right from the basics, especially directly under the CEO. Initial tasks mostly comprised of implementation of tasks and researching, reading and watching webinars. Then I was given bigger responsibilities. My mentors were there to guide me throughout the process. I was handling all the social media activities, the research work for SEO activities and finally the execution part for SEO and coordinating with all the teams involved. Then I was trained in Google Adwords and Facebook Business Manager to manage all the paid marketing campaigns for Sokrati. It was a great exposure. The most important skills required were communication skill, writing skills and analytics skills for running the paid campaigns. I was able to increase the number of followers on social media significantly (almost 3 to 4 times). I was able to learn the two most popular types of paid digital marketing currently in the industry. The experience of PS2 as a whole was great in terms of the learning experience, the learning opportunities and the exposure it provided into marketing.

Nikhil Modani (2012A8PS407G)

PS2 has helped me become a better person professionally and personally. I have loved both the work and culture here at Sokrati. I got an opportunity to work with some very talented peers and mentors and have learnt and grown a lot during my five months. It was a sharp shift in terms of the quality of work required from academics to professional work. Work is exciting, everyone is diligent, and everyone puts in a lot of effort. Sokratians are the kind of people wouldn't leave you behind and put all energies in pulling you out of dumps, encourage you to do your best, guide you along the way. I was a part of the business development team of in LCS – Large Client Services vertical of the company. My responsibilities included researching organizations and individuals online to find new leads. Research about the decision makers in the company and reach out to them via email to initiate a conversation and build rapport with them. After the conversations begin I would then hand over the lead to senior members of my team and they would take the discussion forward. I was also involved in developing marketing strategies and campaigns. I managed outbound leads and current leads in 'Pipedrive' – a CRM and pipeline management software. In the second half of my term I started working with the business analyst team as well. I understood the fundamentals of search engine marketing and learned a new tool 'Google AdWords'. I underwent a 7-days training program on Google AdWords where I learned about bid optimization, how to add keywords, and negatives, create ad copies, and how to launch campaigns. Then I used to add keywords and negatives by analyzing the search term reports of past 30/60 days. I created advert copies of many campaigns for various clients. I used to analyze the keywords report to optimize bids for the keywords. I got to learn a lot of new skills here. The business development work helped me improve my written and spoken communication skills. This role has given me opportunity to gain a good insight into trends in digital spend of companies, effectiveness of digital marketing and analytics which is core for digital marketing. Business

analytics helped me improve my analytical skills and I was able to learn new tools which are quintessential in the digital marketing industry. This was a very good learning experience for me and has helped me transform into a professional.

Shubhum Bhaway (2012A8PS320G)

In the beginning I was part of sales team. My role was to identify new prospects (leads) in US and UK region, generate their contact information and after generating their email address I forward those leads to my mentor for emailing. In the beginning I used to generate around 100-150 leads in a week but when my mentor introduced tools such kickbox.io, rapportive, I was able to generate 500 leads in a week. Later I started reading blogs to find ways to optimize emails. After finding enough material I started creating my own email templates and got those email verified from my mentor. Soon we were using my email templates for outbound in US and UK. While doing all this I was still generating new leads. Later in May I was shifted to Marketing Team, to handle the company's CRM system called Pipedrive. Initially my job in marketing team was to fill the empty data slots with relevant information in the various columns (Organization country, Vertical, Website Traffic and Email Address columns). Once the details were added, I was given the task to handle market research dashboard, and lead MIS sheet. Any leads that used to come from various campaigns were first added in lead MIS sheet and were marked relevant or irrelevant. Then all the relevant leads were distributed among various sales reps and the lead information was added in the Pipedrive. I was also tasked with maintaining the daily Pipedrive status report which contained information about various deals in various stages of sales reps. Overall experience of Sokrati as a PS-2 Station was amazing. PS-2 at Sokrati provided me with great learning experience. This PS station doesn't require any pre requisite for my role but certain communication skills and email writing skills is needed. Mentors here are amazing; they will guide you and help you out on every step. You can also switch teams if you want to learn something new. Being a startup work culture at Sokrati is informal and people here are super helpful. Office timings are flexible, you can to office till 10 -10:30am and leave around 6:30-7pm but depending upon your work, sometimes you have to come early at 9am while sometimes you have to stay late until 10pm. The exposure in the field of sales this PS station provided was great and I sincerely believe that because of experience I gained here I am better prepared for the future and will help in smoother transition from academics.

Sagnik Sarkar(2012A8PS397G)

My overall experience at Sokrati has been quite pleasant. Initially I was in the sales team with Mr Rohit Kelkar as my head. In the Sales team, I learnt how the company functions as a business, how to interact with clients, the kind of clients we should reach out to and i learnt how to write emails and elicit responses from the clients. During this time,i got interested in the business analytics side of things after a formal training session and a number of informal ones,i moved to te business analytics team and started working there. At this time, I didnt have an immediate supervisor but my head manager was Mr Saurav Kumar Patwari who was the head of Business strategy. During this time,i learnt about the technical side of things and how Google Adwords and facebook are used to run ads for various clients. I kept working for different teams in the business analytics department across all sorts of clients, Real Estate Clients,apparel & electronics clients, Lending Services clients,etc. I was allowed to explore and learn on my own and as a result I did a wide range of activities and got to know a lot about how the whole online ad industry

functions. Sokrati's best selling point is its open work environment and a lack of professional rules and bureaucracy. People are nice and helpful and will assist you if you need their help. The company is still a startup and has a long way to go, and they have come a long way in the last 4 years from 20 employees to 200. As an internship station, Sokrati offers a lot of learning oppurtunities and will help you a lot if you choose to continue in this field.

Company: Symantec Software Solutions Pvt. Ltd., Bangalore

Shuvham Agarwal (2011A5C6683H)

You can't build a great building on a weak foundation, you must have a solid foundation if you're going to have a strong superstructure. Internship at Symantec worked for me in the same way.In Symantec, I worked in the PKI team which is involved in the issue and revocation of SSL certificates. My task was to scale the certificate production so that throughput is increased. I started my voyage by learning the certificates in general and basic public key cryptography, then I moved to understanding the spring batch which is an open source framework for batch processing. Then I learned about messaging queues and its usage in real applications. I also got my hands on current caching technique Redis. I essentially worked on spring batch, I used Remote Partitioning which is a master-slave concept for the parallel generation of certificates. Master and slaves were in different JVMs which communicate via ActiveMq which is a consumer-producer model for asynchronous tasks. My project also involved using Hibernate which is an ORM (Object-relational mapping) tool for mapping objects to the database. Along with this, I also learned some advanced topics in Java like Annotations, ReflectionThe internship was a good learning experience as I had the mammoth task of not only familiarizing myself with Certificate Generation , Parallel task execution but also work on it, in real time.But more importantly, the understanding of working as a team, the necessity of working with expectations and deadlines and being committed to your work was the most important take away from the experience.In my time here, I learned how to work alongside other people and learned the true meaning of teamwork and how important colleagues are in an office space. From my seniors, I learned the way to guide a person working under me. The way my mentor listened to my doubts and provided me with the right amount of help, not too much but just enough to set me on a path of self-discovering the solution. It has certainly put me in a better place, where I can easily bridge the "experience gap" between understanding and performance, which otherwise was missing.My knowledge of cryptography and certificates has escalated. Before coming I had only the basic knowledge of the Security, Messaging, Caching, Java etc, but after all these months in Symantec, I can apply all these concepts in the real applications. I can confidently put these as my interests and skills. I am more disciplined as a person and I am looking forward to similar experiences. The industrial experience provided good expertise and the confidence to go ahead and be a part of such an ecosystem. I would like to round by saying that working at Symantec has left me stronger both cerebrally and spiritually. This has been an experience of a lifetime and has definitely made a better engineer and a better person.

Swati Sharma (2014H112176P)

Symantec Corporation is an American technology company. The company produces software for security, storage, backup and availability - and offers professional services to support its software. The project

assigned to me was CRL generation using java. The objective of project is to build a distributed CRL Engine which will generate CRL(s) for all of CA(s) based on frequencies provided by PKI-Admin. The application should be designed and built in a robust way to meet performance, scalability and high availability criteria for all CA(s) under given time interval in which CRL should be published to a client for download. Skill set required for implementing the project is advanced java, PKI architecture, Quartz Scheduler, Redis, MongoDB, Oracle DB, and OpenSSL, CRL. First month I spent on to study about the PKI architecture. Public Key Cryptography also called asymmetric key cryptography. This method solves the problem of secret key cryptography by using two keys instead of a single key. Quartz scheduler is used for periodically generating the CRL. In the second month the problem specification definition and design of the overall architecture defined. The overall learning was purely security based concepts oriented. After finalizing the design the coding process started and in the end testing of designed product. In terms of learning, the experience has been nothing short of terrific. The time spent at PS-2 has been a great teacher in various spheres, including but not limited to understanding corporate life, expert guidance, apprehending new technologies and their developments and building an essential character. In terms of academics, the training holds a lot of scope on a significant scale. One is expected to learn, work and develop on new technologies applying one's university education, which is, in itself, a mammoth task to achieve; so much that PS-1 appears to be a joke when compared to its senior and significant counterpart. Things taught in college are just not enough. The industry is working on feats that are a century ahead of what is taught as academics. Sure, the basics are still the same; but constant learning is not a myth- it's the very reality we exist in and PS-2 has just been a reminder of the same.PS-2 helps one to build their personal, knowledge base and interact with industry experts. The experience at PS-2 - if not affect my future career prospects - has at least made me aware of the current industry standard and situation and that adds to better chances at scoring a workplace.

Saurabh Dublish (2013H313082H)

My PS-2 Experience is wonderful and enriching in so many ways. I spent 5+ months in Symantec Software Solutions, Bangalore as Intern which cannot be described nothing less than awesome. I enjoyed every bit of my tenure as Intern at Symantec. This Internship helped me in understanding what it takes to develop a world class product for enterprises. I learnt how to work in teams and help each other in order to complete the project on time. I learnt in great deal about how a product is proposed then how we plan its architecture and then model it to our needs then how development starts and later how its performance is measured and later how it is released. While my working as Intern I learnt more in 5 plus months about Computer science than I learnt in my whole 2.5 years in college. I learnt how actual theory learnt from college with some extra knowledge is transformed in hands on practical project development. I did total of three projects in my Internship. There is no special book that is needed to do these three projects but these projects require cumulative knowledge of many courses taught at college. Being an Information security expert it became easy for me to pick up the challenge with some ease but lot needs to be learnt from Internet. These projects require sound and through understanding of Operating System, Network Security and Cryptography which is most important of all. Also an individual requires good knowledge and hands on experience on working in Linux environment. My first project is about Certificate discovery and Vulnerability Detection. In this I build a tool from source code and run it on some old supported versions of RHEL by Symantec. In Vulnerability module I did research on 12 supported TLS/SSL

Vulnerabilities by Symantec and device methods to detect these by our CIC product. This project requires extensive understanding about cryptography and TLS protocol of TCP/IP suite. Since I hold expertise in information security I was able to dig deep into project and this project enhance my knowledge and help me move from amateur to professional. My second project is on Big Data technology where I build Hbase database over Hadoop in Hybrid model. I come up with new architecture of storing data in hbase and provide a model to shift from Oracle database to my new Hybrid Hbase Model. In this project I learnt about JDBC and develop an equivalent way to connect to my Hbase database. From this project I get exposed to MVC code development of project. My third project is on Oracle In-Memory. This is a new feature provided by Oracle In its new release of database version 12c. This feature provides storing tables in column format like Hbase and other Big-data database does alongside with it's traditional row format. I measure the performance improvement of complex queries when In-memory feature is enabled and when not enabled. On the whole I will like to say my internship at Symantec helped me in transforming from beginner to advanced level in security domain.

Sagar Suresh Choudhari (2014H112183P)

Working in Symantec is like me edging one step towards my aims and dreams. It has been a great experience working with one of the best companies in the IT world. Working with a company that is at the topmost level in the Security domain and whose products are globally used and trusted upon is a dream come true. The company and the people here are genuinely concerned about the threats that occur in the Computer Science domain and they continuously strive towards eliminating these threats. The main focus of Symantec, Bangalore is Website Security Engineering, which includes engineering products for securing web servers and different applications of the customers. The team which I was associated with was SAS – Secure App Service. The team's work was to create a code-signing applications for different application through Symantec cloud. I was assigned independent work of understanding different build tools and create a tool that determines the list of the artifacts each tool's build created before-hand and create plugins that will sign these artifacts. The project required knowledge of JAVA, different build tools, understanding of the build scripts and different output types. Prior to joining this project I had basic knowledge of java which was enhanced here during the project implementation. During my PS, I got acquainted with different build tools and the build script which was basically XML. I learned lot about these tools and how to parse the xml file and get the details I require. This has tremendously increased my confidence over my knowledge on java and these build tools, which I can very easily use in my future industry endeavors. The experience here has taught me, how approach any problem and get intended solutions various angles. This has definitely helped me to become more experience than what I was in BITS. The experience has increased my ability to interact with industry professionals and also increased my confidence in sailing into any waters in the IT industry.I would be very thankful to my mentors and Manager in Symantec who were always available when I required their help and helped me to get on track and guide me. Lastly, I would say that, experience at Symantec for these 5 months has created a gem of memory for years to come.

Divya (2014H112185P)

My PS station is Symantec, Bangalore. I have been working here as a part of SAS team. The PS II duration has been an amazing learning opportunity for me. It is not only limited to understanding corporate life but expert guidance, apprehending new technologies and their development. I can definitely say that this experience has trained me immensely in the skill set, attitude and dedication required to work in corporate life. My project was to implement hash signing in java which was calculating the hash of the data and then getting it signed. For the implementation of the project, I had to learn a lot about various technologies like JCA, code signing, hash signing and some basic knowledge of shared libraries and APIs in java. I also learnt about various hashing and signing algorithms like RSA, DSA etc. This task helped me become familiar with basics of signing and hashing concepts. Apart from learning, I have also realized how working in corporate is different from academic projects. In industry there is a lot of emphasis on handling the boundary cases related to a given problem. Also, the problems are subjected to large number of stress tests so as to make them as bug-proof as possible. The programs are also reviewed by various people to reduce possibility of issues. The major take back that I have taken from this internship is that it has widened my knowledge base and awareness of the working in corporate life. It will definitely be of a great help in planning my career more pragmatically. Practice School experience has also helped us become familiar with the required professional attitude and the working environment of companies. We also got an opportunity to interact with and learn from many professionals who already have a lot of experience of working in industry. The constructive feedback from them has helped us in developing new skills as well as refining other skills. Hence Practice school has provided me ample opportunity to implement the techniques learnt in classroom as well as learn new concepts. My ability to solve the problems in the way advised and also in the time allotted is definitely an accomplishment for me. I sincerely believe that due to this hands-on experience we are now better prepared for the future and experienced gained here will help in smoother transition from academics.

Rakesh Rangappa (2013H313081H)

My internship at Symantec Corporation has taught me more than I could have ever imagined. I have been operating as a part of the Validation & Identity Protection (VIP) Team over the past 5 months and my experience has been awe-inspiring. As my interests lie in the field of Information & Cyber security, Symantec has given me a perfect kickoff to my calling. The major focal point of my project was to develop a generic Cloud based User Life-Cycle Management client for enterprise. In the process of accomplishing my tasks, I was let out to many new concepts and technologies. Although a significant portion of the task was completely new to me, applying the concepts that I learnt during my time at BITS, Pilani gave me huge satisfaction. PS-2 is ideal opportunity to produce a quiet transition from academic to a corporate life. Along with improving my technical knowledge, the past few months have taught me some invaluable lessons. Walking into Symantec with no prior Industrial experience made me nervous initially, but my mentor, my manager and the entire team has been absolutely wonderful throughout providing just the proper measure of direction. In closing, I would say that working at Symantec was definitely fun. I walk out of this place with a bag full of warm memories. I couldn't have asked for more.

Mitesh Agrawal (2012A7PS056P)

I was working with Symantec, Bangalore as my PS-II program. My project was under VIP (validation and ID protection) team. This internship period was great learning experience; I was exposed to many new technologies, like WebRTC, which is only 2-3 years old. My initial work involved working with android application to improve and introduce some desired features in it, later on I was shifted to iOS development. In primary stage, I learnt about android and iOS development. Also as part of project work, I had to learn many new technologies and APIs, like 3D touch, spotlight search, different methods of authenticating nearby devices, motion activity and other sensor data retrieval. Some of them were even less than 1 year old and had less resource to learn from. But the managers and mentors were readily approachable and really kind with the help. The company is not ignorant of new ideas from amateur minds. In fact they encourage us to come up with any new idea for the application or otherwise and take efforts to study and implement it. All the interns had independent and core projects and had great opportunity to learn various tools and technologies. I have seen some great appreciation of work here; even some of our work will be used in upcoming deployments with some improvements. All the doubts and bugs were entertained and regularly discussed and clarified. This was the best thing that I liked about working here. Practice School was prominent opportunity of working with corporate firm and industrial projects. Which made us learn many aspects of project, which are generally in dark in any academic project that we do in any other semesters. Importance is given for writing easily readable codes, following specified flow of program, adapting standard design patterns, separation of concerns and proper variable names, rigorous bug testing and code reviewing at many levels covers almost all corner cases that are to be considered in scope of the project. This experience has made us accustomed with attitude and working environment in any firm. Interaction and guidance from highly experienced personnel helped in improving learning curves and also in refining learnt technologies. This first-hand experience has prepared us for upcoming experiences and this will surely help in smoothing transition from academics.

Dhumil agarwal (2014H112177P)

At Symantec Bangalore, I was a part of the Website Security Engineering Team. Here, my job responsibility was to carry out Research on HTTP/2 and Server Push Technologies. I conducted feasibility tests and checks on the capability of the existing software to support the Server Push features. This Project required a deep knowledge of Server side technologies and Computer Networks. I learnt these technologies through YouTube videos and W3Schools. My mentors at Symantec were helpful and regularly guided me to the right track when I deviated. Later on, I also worked on a Gradle Project, which involved intense coding in Groovy Programming Language. This part was very exciting and challenging. This Project helped me bridge a major gap in my knowledge in the domain of Computer Science. I learned how to automate the incremental delivery of the Software Systems in an Agile Development Environment. Both of my Projects were on technologies which were released recently. Hence, there was limited online resources and support for them. Such a situation made me capable to learn new technologies on my own and made me believe that I can start any Project from scratch. It has made me capable of leading and designing major Software Development Projects, a skill which may help me take up roles of Full Stack Software Engineer in future. My tenure at Symantec has also benefitted me non-technically. Its unique work timings have made me adopt to a fit and regular lifestyle, and have helped me to become more disciplined.

Its wonderful recreational facilities in the office encouraged me to learn new games. Hence, I would say that I had a wonderful time at Symantec.

Vikram Singh Chauhan (2013H313080H)

As my degree specialization is information security the best part of my PS was the opportunity to work with Symantec Software Solutions which is a global leader in the field of cyber security. Past five months have been a great learning opportunity for me. I was not only trained technically but also exposed to the working standards of the industry. In Symantec working hours were flexible and interns were given the same treatment as regular employees. Employees are highly qualified and experienced. I was the part of Secure App Service (SAS) team. My team is working on the cloud based code signing SAS which is more secure and convenient than the traditional code signing process. As the part of my project I have worked to develop standalone code signing utility that would make the cloud based code signing more convenient for the users by shifting intelligence from cloud side to the client side and help to automate the code signing for large projects. In the first few weeks I have learned various security concepts like code signing, public key infrastructure (PKI), digital certificates. For the implementation of the project I worked on technologies like JAVA, JavaScript, web sockets, SOAP web services, Windows sign tool, Node.js framework. In my time here, I learned how to work alongside other people and learned the true meaning of teamwork and how important colleagues are in an office space. To conclude Practice School experience helped me to become familiar with the required professional attitude and the working environment of companies. It has provided me ample opportunity to implement the techniques learnt in classroom. The constructive feedback from my mentor has helped me in developing and refining skills. I would like to recommend Symantec for the people who are interested in information security domain.

N Naga Srinikitha (2012AAPS199H)

My PS 2 station was Symantec Software Solutions, Bangalore. As a student of ECE, PS2 at Symantec was a new learning experience into Computer Science components, like JAVA Programming, JSP, HTML and Website Building. I worked in the Indirect QA Team, where I was given a project to build a one stop User Interface for the utilities of the team. During this process, I learnt various programming skills like, JAVA, JQuery, JavaScript, JSP and HTML. I had to build a code to access various URLs based on certification access and remote login to remote servers, access configuration files and extract the needed information from them. I also built a tool to upload and run multiple scripts from the UI. During this process, I was exposed to various coding methods, which was a new experience and no doubt, a great learning experience. During my time here, I learned how to work alongside other people and learned the true meaning of teamwork and how important colleagues are in an office space. I also learnt problem solving skills and how to tackle problems swiftly. PS has helped me learn how to engage in corporate culture and balance work and life. It has been an overall development of personality, attitude and knowledge. We also got a chance to interact with the CEO and other top level managers and showcase our projects. Overall, PS2 experience was a great bolster to build our future career prospects and lay as a basic foundation for our future corporate endeavors.

Company: Symantec Software Solutions Pvt. Ltd., Pune

Swapnil Shukla(2014H103019H)

My project was a proof of concept project, where we had to show that we can represent dynamic behaviour of the execution of a program via means of an image and use that image representation with image classifier algorithm to determine whether the given file is malicious or valid file. It was a new idea that was shown to work theoretically. But there was no practical proof to this concept. Me along with my mentor worked towards the goal of coming up with a suitable image representation and training the image classifier model for classifying images to be malicious or non-malicious. We fixed one image representation where the events occurring during the execution of the file, are arranged in a square grid. Each cell on square grid represented existence and/or frequency of the event in a particular file. This image representation was used for building an image classifier model. Concepts of Deep Learning were used for building image classifier model. This involved training a neural network model known as convolutional neural network designed specifically for image classification problems. We showed that the trained model was able to classify images with more than 80% accuracy. It was a great learning experience of working on a real world project. In terms of technologies learned python and proper industrial level coding. This involved maintaining proper log files, exception handling, writing efficient algorithms, thorough testing of the code, and documentation. This skills are essential whenever one wants to build a perfectly running code. I got learn about theory and implementation aspects of neural networks and convolutional neural networks. I am really grateful to be able to learn these technologies. This learning will be really precious in my future career. Symantec, Pune had great projects for PS-II interns. We got to work with really intelligent people who were always ready to help whenever we needed. Also interns working there are treated as same as the regular employees and they will get almost all the benefits that regular employees would get. I will leave the company with great knowledge and professional life experience which I would have never had inside the campus. I believe PS-II program offered by BITS has a great impact on students in terms of preparing for future career. I like to thank PS-II division and all of the members working for it, for a really well organized and impactful program.

Rachit Bhatia(2012A7PS077G)

My PS was at Symantec Software Solutions Pvt. Ltd. Pune. The project that was chosen for me by my team there was a very academic one.The primary goal of my project was to enhance an open source tool called Drakvuf for hypervisor-based malware analysis. The software is still in active development. A lot of features which are common in commercial hypervisor-based malware analysis were added. My aim is to recognize all possible enhancements and code them into Drakvuf so that they can be useful as a scalable and effective malware analysis solution which saves the organization both time and money.
A thorough understanding of C++ and Operating System concepts was a prerequisite for my task. The experience has benefited me immensely in understanding how professional organizations work. Adherence to deadlines, punctuality, and facing challenges positively as things to learn were one of the major takeaways. My mentors were BITSians which was a huge plus. They already knew what the curriculum was and guided me very well. They had a very balanced approach- giving me a gentle push in the direction to seek knowledge but not be very pervasive in my work. This gave me freedom to pursue my own ideas and often experiment with new techniques. When I left I was enriched in the basic concepts of hypervisor-based malware analysis in specific and computer security in general. My project is expected

to achieve huge savings for Symantec. This system can replace proprietary software prevalent for this task. I was appreciated and encouraged by my team members in the organization.

Aditya Suman Maharana(2012A7PS041P)

The project I worked during my time at Symantec was titled as "Building Intelligence on top of YARN Resource Monitor to maintain the health of the Hadoop Cluster" The primary goal of this project is to build an application on top of the Yarn Resource Manager present in the Apache Hadoop Cluster at Symantec which would add intelligence to it. The application would intelligently classify the applications running on the cluster as expedient or nugatory. The above application would help in freeing up the cluster resources, which would have otherwise been bogged down into these nugatory jobs. The project was a necessity at the corporation as there are hundreds of queries running everyday on the Hadoop Clusters of the corporation. The application aimed at providing a smooth running environment for these queries. The project required an in-depth knowledge of the functioning of distributed systems and especially Hadoop framework and its subsidiaries like Hive. The project also required basic coding skills in Java and Python. The project helped me realize the environment of application development in a commercial corporation which is quite different from what I was used to in coding competitions and course projects at the University.

Venkatesh Gubbala(2012A7PS079H)

In the first few weeks after the practice had started, my assignment was to learn the basics and functions of the product Infoscale Access. I learned by reading manuals, clearing my doubts with the help of team members and sketching my ideas of understanding. I feel that this assignment time could be shortened by providing counseling hours from the experts in the respective fields. Nevertheless, it was a great experience to explore a great modern technology by myself. I was part of a team with primary objective of developing the web application for Solutions of Data Insights and Orchestration. I learned the prerequisites of web development like using GitHub and setting up development environment with Eclipse and so on. With first of the two assignments, I tried my hands on ExtJS, Java and other minor scripts which are required for running application. I learned the Agile too. SDIO alone out of Veritas' other products has a great potential to be worth of being a separate entity. My final assignment was to pick a module of commands and perform and introduce automation and automation scripts respectively to ensure the best functionality of the product. This assignment required us to learn the python scripting, server communications, python and Linux process debugging. We did Grey-box testing to automate interface interaction and functionality of the commands. But it is always better to do White-box testing and automate the source code. Since white-box testing puts great amount of work-load and consumes a lot of time, it is the organization's decision to do White-box. This was a very big opportunity for me to put hands on a large-scale data orchestration software. This project helped me to get an idea of overall architecture of software defined storage management application that is used for storing heterogeneous data. I had a hands-on experience of a number of scripting languages because of the product. Since many organizations in IT field collect thousands of terabytes of heterogeneous data, SDIO has a great opportunity to lead the IT industrial revolution.

Company: Swiggy Bangalore

Radhakrishnan T (2014H10302026H)

Swiggy has developed an android application and a website for ordering food from restaurants online through website. The customer places an order using mobile phone or computer. The placed order is assigned to a delivery boy either automatically by order processing system or manually from UI dashboard. I worked on the automated order processing system of Swiggy. My project involved working on the components of the full stack of software that deals with automated order processing. I worked on multiple features related to improving the performance of the system and optimising the cost and time of order delivery.   The skill sets required for the projects were Core Java, Spring, Hibernate, Django, Python, HTML, Javascript,Jquery, Redis, MySQL and RabbitMQ. Few of these skills, like Core Java, was learnt from my previous work experience and academic projects. For web development and technologies like Spring and Hibernate, I learned from training videos and internet resources. I have read Django from Django documentation. In the initial days, it was very tough to get used to the newer technologies like Django. My mentor and my team-mates helped a lot during the course of internship. My learnings from the PS-II experience is on the following areas – Software development skills, Software Design Skills and Soft skills. In terms of software development skills, Swiggy followed the lean methodology of developing a software feature in the shortest possible time without compromising on the quality. Object oriented programming languages and frameworks are being put into great use for rapid application development. In terms of Software Design, I practically learnt about how to make independent applications to talk to each other through messaging or through a common persistent storage like databases. This lead to developing independent smaller components and thus increasing the stability of the software system as a whole. In terms of soft skills, I learned good email communication, following up on work items pending with other teams, pro-active communication and presentation skills and verbal discussions.   The technology stack used at Swiggy is very recent and getting to use all the recent technologies together for building a complex system is a great learning for me. My major accomplishment during the internship is the software developed for generating cash report of each food order. It is one of the critical piece of software delivered during the PS-II internship. It is used by the finance team of Swiggy heavily to validate the cash inflow/outflow of every food order.

Company: Swiggy Mumbai

Sahil Aggarwal (2011B1A2820P)

I completed a one year long Practice School-II with Swiggy, Mumbai. The overall experience of working in this hyper-growth startup and seeing it transform from a nascent startup company to a leading player in the food-delivery market has been an absolutely brilliant one. During the last one year, I have sequentially worked on multiple work-streams, each giving a lot more ownership and learning than the previous one. I started off the first semester by helping the launch team start the business in the city of Mumbai. This was what we called a 'Startup within a startup' experience and involved doing a variety of tasks viz. taking in the first ever hungry customer call at Mumbai office, helping on-boarding efforts for delivery boys and even delivering an order when we ran out of enough delivery supply! Within one month of the launch, I was transferred to the operations team. Here I was tasked to work with the operations management team

to help setup and implement scalable processes to ensure business serviceability across the Mumbai region. This basically involved drafting SOPs, training the on-ground teams and developing data dashboards for continuous monitoring. Over the period of the next four months, I took complete ownership of multiple modeling related work-streams in the operations team including payout incentives for delivery executives, supply planning for hiring targets and even fraud detection algorithms for absconding delivery executives. These 6 months of on-ground operations coupled with the experience of large data management gave me an invaluable insight into the nuts and bolts of the food delivery business. With 6 months of on-ground operations experience under my belt, I volunteered to work with the central leadership team based out of Bangalore. I was assigned to work as an analyst to the General Manager for Vendor Management. This gave me the opportunity to get a more holistic bird's eye view of the entire countrywide operations. I could make significant contributions to a major cost cutting project focused on improving vendor KPIs across all the 8 cities in India. In the last 6 months I focused on developing dashboards for identifying problematic vendors, carried out feasibility studies on the impact of cutting down "low business, high ops issues" vendors and assisted in driving a quarter long change management exercise where I was directly reporting to the leadership team of the company. This gave me a first hand experience of thought processes that go into managing a large startup like Swiggy. Successfully managing the competing interests of multiple stakeholders while being steadfastly focused on the core company goals has been the most important takeaway from this experience. To summarize, the experience of being a part of startup like Swiggy has been quite a fulfilling one. It has given me a great deal of insight into how sustainable companies are built brick by brick. Moreover, the very range of exposure; from CXOs to delivery boys has given me the ability to think from a macro to micro perspective which I believe which go a long way in the professional life ahead. Word of Advice: The only caveat of working in a startup is that the work is only as great as one's skill-sets. So if you hope to come and learn in any startup, make sure you come with the attitude & aptitude to add value from your side first. It is in the process of contributing that your learning will happen.)

Company: TAS Analytic Services, Bangalore

Akhilesh Anand (2014H149231P)

I have done my PS-II at Time Inc. India, Bangalore. Earlier it was known by the name of TAS Analytic Services. Not many of us know that it is fully owned subsidiary of Time Inc., one of the largest, most prestigious and influential names in media industry worldwide!It is home to 90 iconic brands like People, Sports Illustrated, Time, InStyle, Real Simple, Food & Wine, and Fortune, as well as more than 50 diverse brands in the United Kingdom such as Decanter, Horse & Hound and Wallpaper. Do I need to say more in its introduction?? We all must have heard and read about "Time person of the year" title given by this media company to one individual every year for his/her remarkable impact worldwide. One of the most coveted and prestigious feat!As an MBA student, I was part of CDM Team and was reporting to Director, Time Inc. India Retail Division. It was mostly an on-job training mainly focused on Operations aspect of Retail Division. The CDM (Centralized Distribution Management) Team was primarily responsible for two things: Analysis of sales trends of magazines to determine the number of copies that must go for print (Print order calculation) Effective distribution of copies to different locations in US. It was very critical to the company from revenue perspective. As it helped in Reducing the number of UnsoldsMinimizing the

wastage thereby reducing associated costsIncreasing the overall efficiency of Supply Chain PS-II helped me in gaining business insights about media industry and the way it operates. During course of my training I got exposure on various tools and techniques apart from the usual ones like MS Excel. I was also working on third party tools like AIMS in order to extract data and to perform required analysis. As already mentioned that it was On-job training so like other employees I was also involved in Client deliverables and was assigned tasks on a weekly basis. During my tenure I got opportunity to attend Town hall with CFO and CEO of Time Inc. International. It was a good learning experience in terms of understanding the current market position of Company, areas of improvement, strategic steps taken by the senior management and road ahead. Finally I would say my overall experience at this station was nice which was well supplemented by the vibrant culture of the company and pleasant weather of the city!

ArunabhDeka (2014H149293P)

My PS-II station was at TIME Inc.'s Analytical Wing TAS Analytics stationed in Bangalore. I interned here at TIME Inc.'s Retail Wing under the guidance of its Director Ms. VarshaKhullar and my Team (Team Branding) under its two brightest mentors Rameez and Soumavo. My five and a half month tenure started with Induction by its different department Mentors trough which I became about the rich history TIME Inc. carries with itself and how it stand miles ahead of its nearest competitors. Currently it owns around 100+ titles worldwide and is on its way to mark its presence felt on the digital front. Although I wouldn't call my work here a project but regular deliverables since I need to meet them in timely manner. It included doing competitors analysis, their sales of titles, index and cover stories and compare them to our brands competing them in the same category. The skillset required here are the middle to advanced level of Microsoft Excel Skills and making presentation slides. Also one need to know a little bit of MySQL as data is mostly gathered from third party vendors. Pivot Tables, Charts are common attributes to do analysis on. My team has been a constant motivating factor for my performance and I would like to thank my team for believing in my capabilities and mentoring me in the right direction time to time. My overall experience was decent as the organization culture is vibrant, friendly and open but I would like to add a point that this PS Station is not meant for MBA Grads as BE guys would find it more relevant to work under the work profiles here.

Company: TESCO Hindustan Service Centre, Bangalore

Shubham Gupta (2012A3PS189P)

Tesco Hindustan Service Center, Bengaluru has been a great place to learn and grow. Despite being one of the top retailers in the world, they have kept their processes very simple and easy to understand. The work culture is also very friendly. The team members are always ready to help, whether it's a small issue such assuitable format for a PPT or a major issue regarding some project. Even the most senior people are very helpful when it comes to helping their juniors. I have worked here with the Dotcom Insights team on the Grocery Home Shopping (GHS) business vertical. In my first month or so, I worked on the various business reports to gain a better understanding of the Tesco online business. Once I became thorough with all of the reporting stuff, I was assigned one major project which involved a complete analysis of the

impacts due to increased variable delivery charges in the U.K. And I got a chance to work under the direct mentorship of a Senior Analyst sitting out of the U.K. office which proved to be quite helpful for me to improve my communication and negotiation skills. While working on the daily and weekly reports in my initial phase, I learnt tools like Teradata SQL Assistant and ART. When working on the other project, Project Boomerang, I got to work a lot on Hadoop (Impala). We also had training on some other useful Analytics tools such as R, Alteryx andSqoop. Then I also worked on automation of one of the most important Tesco trade dashboards. I took a course on Tableau for this project and then applied my learnings to make the process automated. The overall experience at Tesco has been very good. It sharpened not only my analytical skills but also my soft skills. I got a chance to directly communicate with the corresponding U.K. stakeholders who have an in-depth knowledge of the business. As a result of spending over 5 months at Tesco, I feel that now I'm prepared enough for any kind of professional experience coming my way. The PS 2 experience has helped me acquire the inter-personal skills and soft skills associated with corporate life.

Company: Think and Learn Pvt. Ltd. Bangalore

Gaurav Ghosh (2012A3PS001P)

This was the first time this PS station was offered. The company is India's biggest technology based education company. It offers learning programs for classes 6-12, JEE, AIPMT, CAT, IAS, GRE and GMAT. It also has an android and iOS app called "BYJU's - The learning app". Our work was primarily focused on this mobile application. It was a startup-like atmosphere throughout the duration of our internship. Basic programming knowledge in Java and Python sufficed, along with some knowledge about Android Development There was not much clear definition about our work, we were put on varied assignments, as and when need arose. This might not be to most people's liking but I personally liked the challenge of working on a multitude of things in the span of slightly less than 6 months. The first week we were put to manually test their android app. Later we were put on the QA team to work on automating the testing of their app. This task continued for the entire duration of our internship as the app was relatively big with many activities and functions that required testing. We were also given the task of automating particular software that they used for video compression. This task was neatly accomplished in Python and meant that they could now encode videos in batches overnight instead of needing to manually execute the software for every new video. Thus we were able to directly impact the way they did their work which was very satisfying. We were also given work to write code conforming to new APIs of particular software that they were using which monitored their app activity. We played a crucial role in the automation script that fetches test cases from the cloud, and can execute them simultaneously on Android and iOS devices. We were also taken for a team outing once in February to Mango Mist Resorts in Harapanahalli. It was a day well spent playing games and adventure activities. In conclusion I feel that though enjoyable, the work proceeded a bit haphazardly; with proper prior planning about the work allotment for future interns this PS station can prove to be immensely gratifying.

Company: Tonbo Imaging Pvt Ltd., Bangalore

Anirudh Ramesh (2012A3PS145P)

My PS-II at Tonbo Imaging has been a part of the team working on low-power digital media processors. Past five months have been an amazing learning opportunity for me. I was introduced to various programming as well as operating systems concepts and was provided with a platform to implement those concepts. For my project, I had to employ queues, mutexes, semaphores, buffer pools, multi-threading

and some basic knowledge of shared libraries and architecture of a real time operating system. Apart from this I also used various aspects of media processing of the input stream. These media processing functionalities included de-multiplexing, packet parsing, decoding and rendering of the stream. As part of another task I have worked on modifying the server to support UDP based media streaming. This task helped me become familiar with basics of networking technologies and socket programming. Apart from learning various software related concepts, I have also realized how working in industry is different from academic projects. In industry there is a lot of emphasis on ruggedness and the programs are subjected to large number of stress tests so as to make them as bug-proof as possible. The programs are also reviewed by various people to reduce possibility of bugs. Moreover, even while writing a program, a lot of emphasis is laid on making it easy to read, understand and manage. Practice School experience has also helped us become familiar with the required professional attitude and the working environment of companies. We also got an opportunity to interact with and learn from many professionals who already have a lot of experience of working in industry. The constructive feedback from them has helped us in developing new skills as well as refining other skills. Hence Practice school has provided us ample opportunity to implement the techniques learnt in classroom as well as learn new concepts. I sincerely believe that due to this hands-on experience we are now better prepared for the future and experienced gained here will help in smoother transition from academics.

Atmika Honnalgere

I was a part of Software Development at Tonbo Imaging Private Limited. I worked on varied projects in the course of this internship. The very first project was to reduce the blur and skew in images obtained from a thermal camera. I was required to read research papers focused on the latest techniques developed to reduce blurring through deconvolution. Skew was to be measured by detecting lines in the image (using Hough transform) and measuring the slope. I even implemented Lucy Richardson deconvolution, a non-blind deconvolution method to deblur images. The second project was to calibrate a thermal sensor by computing the gain and offset matrix at varying temperature. It involved capturing images at varying temperatures by putting the camera in a temperature controlled chamber. My final project was to work on an application that tracks objects across the scene captured by the camera. I developed a part of the GUI and also developed a testing framework for the tracker to measure performance. The projects required knowledge of C and C++. However, most of the skills required could be picked up on the job. PS allowed me the freedom to explore my field of interest. I got an opportunity to interact with and learn from many professionals who already have a lot of experience of working in industry. I developed many of the required skills to pursue a career in software development during the course of the internship. The PS program provided an opportunity to discover my strengths and weaknesses and work on them to be better able to contribute to organizational growth.

Prabhjot Singh(2012A4PS325P)

My work in Tonbo Imaging involved designing existing units in sheet metal, designing heat sinks for different units, designing test setup for heat pipe systems for the units which are electro-optical payloads to be deployed in battlefield conditions. This was the main project for the whole internship. Other side projects were also given which were to be completed alongside the main one. These projects involved sealing and purging of the units, anodizing of the units. The projects were assigned as soon as we joined

the company and the mentors were very helpful along the way. Along with these projects, we were involved in assembly of the units, which required no pre-requisite knowledge. We were encouraged to learn outside our projects too. During the course of the internship, I gained a basic understanding of Control Systems, Arduino programming and Mechatronics, which was made possible through the help and guidance of the mentors. As a mechanical student, no pre-requisite knowledge is required but a basic understanding of the CAD software SolidWorks was helpful in the beginning of the internship. Later on, we were given time to learn and apply ourselves, which I feel was the best part of the internship. The company has an excellent work culture, where one can directly interact with the company CTO and COO and give them your thoughts and suggestions, which they are always eager to listen and provide feedback. In conclusion, I would say that working at Tonbo Imaging provided me with immense opportunities to learn and grow. There is never an end to the projects and side projects to engage in, knowledge to gain and provide feedback to the company, which can be seen implemented in real time, which I feel is the best part of working here. If you have an interest in core mechanical design, analysis and testing, and want to be a part of a multi-disciplinary team, then I would suggest picking Tonbo Imaging. My sincere thanks to BITS Pilani and the PS Division for providing me with such an opportunity.

Rohan Mishra(2012A4PS243P)

My work in Tonbo Imaging involved in designing the methodology and implementing the environmental stress testing for Tonbo products, which are electro-optical payloads to be deployed in battlefield conditions. This was the main project for the whole internship. Other side projects were also given which were to be completed alongside the main one. These projects involved sealing and purging of the units, thermal sink design and testing, conversion of present designs to sheet metal ones. The projects were assigned as soon as we joined the company and the mentors were very helpful along the way. Along with these projects, we were involved in assembly of the units, which required no pre-requisite knowledge. We were encouraged to learn outside our projects too. During the course of the internship, I gained a basic understanding of Control Systems, Arduino programming and Mechatronics, which was made possible through the help and guidance of the mentors. As a mechanical student, no pre-requisite knowledge is required but a basic understanding of the CAD software SolidWorks was helpful in the beginning of the internship. Later on, we were given time to learn and apply ourselves, which I feel was the best part of the internship. The company has an excellent work culture, where one can directly interact with the company CTO and COO and give them your thoughts and suggestions, which they are always eager to listen and provide feedback. In conclusion, I would say that working at Tonbo Imaging provided me with immense opportunities to learn and grow. There is never an end to the projects and side projects to engage in, knowledge to gain and provide feedback to the company, which can be seen implemented in real time, which I feel is the best part of working here. If you have an interest in core mechanical design, analysis and testing, and want to be a part of a multi-disciplinary team, then I would suggest picking Tonbo Imaging. My sincere thanks to BITS Pilani and the PS Division for providing me with such an opportunity.

Shubham Bharti(2012A8PS406G)

My PS-II station is Tonbo Imaging Bangalore. I have been working here as a part of Embedded Electronics team. Past five months have been an amazing learning opportunity for me. I was introduced to various programming as well as embedded system concepts and was provided with a platform to implement those

ideas. Major chunk of my project involved designing, building and deploying advanced imaging and sensor systems to sense, understand and control complex environments.For the implementation of the project, I had to learn various concepts like queues, mutexes, semaphores, image processing, multi-threading and some basic knowledge of shared libraries and also Python to automate some of the processes.As part of a task , I worked closely on a unit made with cutting edge technology, which helped me learn alot about image processing. Student coming for electronics internship are expected to have a sound knowledge of C, embedded system and some experience with Python. The initial two weeks in the company are all study about various technologies they are using but that is exactly what sets a tone for the next five months at office. Once you are experienced enough , you can see your work going directly into a product. We also got an opportunity to interact with and learn from many essionals who already have a lot of experience of working in industry. The team has rich experience on a range of battlefield modernization technologies, immersive surveillance and strategic electronics for military applications. The company principals and management have global experience being principal investigators for defense and aerospace programs. The constructive feedback from them has helped us in developing new skills as well as refining other skills. Hence Practice school has provided us ample opportunity to implement the techniques learnt in classroom as well as learn new concepts. I sincerely believe that due to this hands-on experience we are now better prepared for the future and experienced gained here will help in smoother transition from academics. To conclude, I would like to recommend this place as an option for all Electronics Engineering students who want to experience working somewhere you will feel independent and important.

Vellala Shanmukha Spandana

I have been a part of two teams Embedded Software Testing and Development team and RTL Design team at Tonbo Imaging Private Limited. I had learnt about middle ware, programming practices, industrial practices in developing testing frameworks and benchmarks for various defense and military grade products. I have worked on three different projects in the course of my five and half month internship. For my first project I had to learn a middleware cum operating system known as Robotic Operating System (ROS) and its features, applications and functionalities. For the next one I had to calibrate a magnetic compass used in most of the company's products and calibrate a cross platform testing framework for the products. For this project I had to brush up my programming skills and understand various testing standards and practices in the industry. It involved learning of multithreading, usage of pipes, mutexes, and binary semaphores and implementing them according to the device specified. The next project involved developing of a sharpening filter for modifying images. For this I had to revise a few image processing techniques and filters concepts. I had to revisit the techniques taught in the classroom and develop a methodology for applying such techniques for the industrial standards (these require minimal error window). I had learnt to write bug free code, learnt various embedded software related concepts and implemented them in the real-time projects given by the company. I also understood various practices followed in industry for testing a product before its release into the market. I also understood the subtle difference between the academic projects and the real-time industrial products in terms of accuracy, testing and subjecting to harsh environment conditions before it reaches the customers. My initial work involved development of serial communication between two PCs running full blown ROS using various packages supported by ROS like rosserial, rosserial_arduino, rosserial_tivac, rosserial_embeddedlinux and various libraries like roscpp, roslisp, rospy. Later the testing framework was developed for a device with various modules like daylight imager, EO camera, sense array, LRF. The multithreading and semaphores helped in switching between the various modules and at the same time capturing the necessary readings. The project was further automated by developing functions for capturing the snapshots while sending a

command, obtaining a response and checking the modifications in parameters. The other project involved developing a Verilog code for a sharpening filter which has minimum error window. Accordingly the appropriate filters have been examined and methodology for a customized (a near ideal) filter suiting the specifications is developed. The initial project involved the learning and mastering of Robotic Operating Systems middleware, and I had followed the tutorials in the ros.org webpage (community of ROS developers and enthusiasts). The other project needed an optimized way for developing testing framework which was done by revisiting the fundamental C and python concepts whenever required. The other one required brushing up of the filtering concepts and required material was provided by the mentor. Practice School experience has also helped me become familiar with the required attitude and the working environment of companies. I got an opportunity to interact with and learn from many professionals who already have a lot of experience of working in industry. The constructive feedback provided by them from time to time has helped me in developing new skills as well as refining other skills. The PS program provided an opportunity of analyzing my strengths as a team player and also an individual contributor apart for contributing to the organizational growth.

Company: Tolexo Online Pvt Ltd, Noida

Mohit Ghai (2014H149289P)

I have been working here as a Management Trainee in Marketing Department. Past five months, have been an amazing learning opportunity for me. I was introduced to different aspects of online marketing that includes Search Engine Marketing, Email Marketing, SMS marketing, Mobile Marketing as well as other related concepts and was provided with a platform to implement those concepts. Major chunk of my project involved strategically creating campaigns to improve the productivity of different marketing campaigns. For the implementation of the project, I had to learn various concepts like ROI Analysis, Bid and Campaign Management, Advanced Keyword Research, Google Account Setup, Search Engine Marketing, SMS marketing, R Tool and basic knowledge of shared libraries and different categorization of audiences. Apart from this I also learnt various aspects of mobile marketing channels. In addition to this I also learnt R to improve my analytical skills. Leveraging my experience as a Application Programmer I have also assisted my tech team to develop an ERP software for my various corporate clients with a detailed analysis and design of the same. These tasks helped me become familiar with basics of different Google marketing channels. It also introduced me to various categorizations of campaigns and their respective remarketing lists. Apart from learning various online marketing related concepts, I have also realized how working in industry is different from academic projects. In industry there is a lot of emphasis on optimizing the metrics and getting results from the same. Also, the programs are subjected to large number of stress tests so as to make them as improve the customer experience with a measurable return on investment. Moreover, even while creating and making the changes in the campaigns, a lot of emphasis is laid on controlling the cost per order with an increase in relevant web traffic month on month. These kinds of practices are very essential to industries. Practice School experience has also helped us become familiar with the required professional attitude and the working environment of companies. We also got an opportunity to interact with and learn from many professionals who already have a lot of experience of working in industry. The constructive feedback from them has helped us in developing new skills as well as refining other skills. Hence Practice school has provided us ample opportunity to implement the techniques learnt in classroom as well as learn new concepts. I sincerely believe that due to this hands-on

experience we are now better prepared for the future and experienced gained here will help in smoother transition from academics I have been lauded by my Managing team and Senior VPs on different occasions for assisting in accomplishing business milestones.

Shashank Saxena (2014H149248P)

When I joined BITS Pilani MBA, I was bit concerned for the corporate exposure that BITS and PS will offer me as there is not much corporate culture around. But as college life progressed I came to know from my seniors that the PS system is one of the best in country and I was told that I will have an experience like never before in terms of learning and development. As I joined PS, I realized those words were cent percent true and there is whole world out here to explore. The company and city gave me perfect combination to groom in. The mentors in the company were so helpful and counseled me through every challenge I faced. The projects imparted lots and lots of learning. I was given this task to design some of the new logics that will add intense value to the organization. The development of such systems gave me completely new way of thinking and improved my skill set profusely. The culture of the organization was too good to work in and was completely amicable where fresh ideas and innovative solution are hugely welcomed. I am so thankful to BITS and PS Division for providing me with such opportunity. The opportunity that extracted best out of myself and set me ready for the forthcoming corporate challenges.

Company: UrbanClap Technologies Pvt. Ltd., Gurgaon

Ananth Radhakrishnan (2012A7PS024P)

PS2 at Urbaclap was definitely a great experience, both in terms of being a practical application of the subjects that I learned as well as being a great exposure to the industrial world. I came in as a fresher who had no prior experience in Android development. The mentors at Urbanclap were not only patient while I got into my bearings with android, but were ever ready to help and solve any of my doubts, regardless of how trivial they may have been. The major projects I worked on was on developing a new contact picker for the app, a image picker library, analytics related to the performance of the app, and localization of the app into Hindi. The projects gave me a great exposure to the usage of git in code development, importance of open source libraries, the nuances of an app's performance and how to improve it and the complexities involved in the localization of an app. Beyond development, an internship at a startup is a very all rounded experience. The decisions regarding the company take place before you, and even as an intern you have a say in them. The strategies and plans used to run the company happen on a ground level, and allow you to get an idea of the intricacies involved in the running of a company. All in all, the opportunity to work in an up and coming startup like this, and to take up the responsibility of live projects was a great experience, and is something that has definitely helped me develop as an individual.

Chirag Bansal (2011B3A7791P)

My internship at UrbanClap has been an overall enriching experience. In terms of learning, the experience has been nothing short of terrific. The time spent at PS2 has been a great teacher in various spheres, including but not limited to understanding corporate life, expert guidance and apprehending new technologies and their developments. This PS2 internship has given me exposure to corporate life and gave me a better understanding of the startup culture and the processes involved in end to end product development. Working at UrbanClap, I realised the importance of writing efficient and scalable codes. I was part of Customer Android team. Initially when I was allotted the team, I was a bit worried as I had never worked on Android previously. But the constant support, guidance and motivation of my mentors and teammates helped me get through the concepts of Android programming easily. I got to work on 4 different projects here that include Developing Cart and Scheduler system for booking categories, Real time Uberlike model for booking PEC categories (Plumbers, Electricians and Carpenters), TwoClick Checkout Model and Book Now/Book Later model for all the booking categories. All the 4 projects are currently used on the live app of UrbanClap. I learnt many new skills during the course of my internship. I learnt some very important things. Firstly, I got exposed to the world of Android and its applications in the development of real world applications. Also, I got to learn about version controls like Git. Finally, I learnt about handling pressures like delivering the code on time. This coupled with having very experienced and knowledgeable mentors shaped my thinking in carrying out projects the way they should be. I got to experience the corporate life first hand which helped me in understanding the way things are carried out in the corporate world. This is very different from the college life we were used to living. This gives you a sense of ownership which will lead you to great things in life. Secondly, you get to work on real life projects which teach you many things that you don't see in college. The new technologies coupled with great mentors, give you a fresh perspective to developing things. One PS achievement would be the Cart and Scheduler system development which was completed in about 30 days due to the requirement of the product. This completely changed the booking flow and increased the customer interactions on the app.

Company: Vymo, Bangalore

Saurabh Bhardwaj (2012A1PS385P)

The Overall Experience at Vymo has been challenging. PS II generally gives you the idea as to how the industry works, how to apply the things learnt in college. My project was in the engineering section where I had to learn JavaScript (nodeJS) along with the new upcoming technology react- native which is used to create hybrid applications. During my PS I worked on the iOS side of an application and learned the different aspects of not only the technical side of a project but as to how a company runs as the company had only 16 employees when I started my PS and hence was able to understand as to how a new company works from inside. I was not given any specific training for the language required but rather was told to learn on the job which was challenging. Also, the projects allotted in this company are not a specific project but however some actual specifications which their clients want them to include in their app, so effectively the work you are doing is directly based on some client request and you can see the results of your work being integrated in the company in no time

Domain- Biotechnology

Company: National Centre for Biological Sciences [NCBS], Bangalore

Anjali Yadav (2014H129008P)

I decided to join National Centre for Biological Sciences as my PS- II station because of my interest to pursue research in Biotechnology. Knowing about the top cutting- edge research happening at NCBS, I did not want to miss this opportunity to work with the world- class faculty. After coming to NCBS, I got a holistic view towards the importance of research in human healthcare. As different Principal investigators are focusing on understanding the various aspects of human body, such as tissue homeostasis, wound healing, inflammation, development, etc., there are number of lab groups within NCBS, each with a concentrated area of study (refer to NCBS website). I joined Dr. Srikala Raghavan, a member of the 'Centre for Inflammation and Tissue Homeostasis' theme at inStem. She focuses on skin tissue and uses mice as a model system for studying the same. My project is entitled as 'Role of microRNAs in Hair Follicle Stem Cell compartment'. miRNAs play pivotal role in gene regulation in most of the biological processes. Reports have shown its importance in HFSC maintenance. However, a comprehensive study to understand this complex gene regulatory network in maintenance of HFSC fate is lacking. This study aims to understand the role of miRNAs that play crucial roles in maintenance and regulation of epidermal stem cell fate. The course work on Stem Cell and Regenerative Biology at BITS Pilani proved to be very useful in this project. However, to start any project literature study is must, so I did the same for 1.5 months. It not only helped me to become acquainted with what is already known about the skin morphology, signaling, hair cycling and regeneration, rather it helped me in designing and standardizing experiments on my own. As the institute is well equipped with all the necessary instruments, I had got hands on experience on instruments like confocal microscopy, cryosectiong, flow cytometry (required for my project), in addition to doing experiments such as, in- situ hybridization, PAGE, Real time PCR, mice sectioning and making skin blocks. Overall, the experience has been worth coming as it helped in directing me towards PhD. Along with the exposure to research and science I have learnt, what I liked the most is friendly- environment at NCBS. From your boss to research scholar everyone is very helpful and cooperative, whom you can catch anywhere in the campus for the discussions and they will be ready to help. Here you also get plenty of chances to interact with the researchers from foreign Universities as they come for talks in conferences, which happen very frequently. To all those who want to learn good science, NCBS is one of the best place to do it in the India.

Rajat Singh (2010B1A1643H)

My PS-2 experience at National Centre for Biological Sciences was very good. I was assigned to   Dr. Varadharajan Sundaramurthy who is a great P.I. All the lab members were very helpful. NCBS is one of the best research institutes in India. I worked on two projects: The aim was to find out the fraction of total cell volume occupied by parasitic vacuole and the nuclei 24 hours post infection and 48 hours post infection. The parasite being *Plasmodium berghei* and the cells being hepatocytes.Software used were cell profiler and Image J. The images were 3D so they had to be broken down stack by stack in cell profiler so as to retrieve data. A pipeline was built on cell profiler to identify the cell and the parasite. Objects were

identified then and the corresponding area was measured with the help of modules. Integrating the area over the Z stack length gave the volume of the objects. Hence fraction of volume occupied by the parasite and the nuclei was calculated. The aim was to find out if there was a change in polarity after knocking down proteins that might play a role in the establishment and maintenance of polarity. This was done by treating the wells with a compound library. The software used were CellProfiler and KNIME. A pipeline was built on cell profiler to identify and segment bile canaliculi and the nuclei. Objects were identified and the corresponding area was measured with the help of modules. The increase in area occupied by the bile indicated that there was an increase in polarity and vice versa. A pipeline on KNIME was built to work on the extracted data and identify the 'hits'.It was a very good learning experience for me here at NCBS. The software that I learnt here were: (1) Image Analysis: CellProfiler, ImageJ , (2) Data Analysis: R, KNIME.Overall, the experience has been really positive. The new tools that I learnt will be very useful for me in the near future.

Company: BeckmanCoulter, Bangalore Development Center, Bangalore

Adithya Ramesh (2012A1PS263H)

As someone with no prior experience working in the industry, I would advise that what I say be taken with a grain of salt. My internship in Beckman Coulter was extremely enjoyable to me. The company's attitude was something that can be expected from an MNC as widespread and important as Beckman Coulter. We were trained well, encouraged to doubt, to question, to push back and be creative and the best of all, our opinions mattered at the end of the day. Since the Bangalore Development center is still a small company only 47 strong, there is a lot of interaction with our peers and the environment is extremely friendly and welcoming and I wouldn't be exaggerating if I were to say I felt like we were like one big family. In my 5 months in this company I was exposed to a wide variety of experiences that I found out is integral to every company. From a small 3-day site wide self-development workshop, to internal and external audits, a site-wide participation in the TCS 10K Marathon, and even being in the vicinity of the Provident Fund street-protests in the Peenya Industrial Area, it was an extremely thrilling roller coaster ride. Even as interns our participation in any and all meetings with regards to ongoing projects were encouraged and we were made to feel as part of the team. For any research enthusiast who loves immunology, I would ask him or her to look no further than this company. There were 2 projects that I was involved in, the first being to test if the idea of a universal compensation kit that would work to compensate all multicolor panels up to 10 colors that feature the use of 10 particular fluorescent dyes, would be possible. The second project I was involved in was the development of a bead based cell counting assay for flow cytometry, which could be dried down in the form a simple, robust easy-to-use tube, that only require that you add the sample of cells you want to count, lyse (if necessary) and run the tube in the flow cytometer to get the final count of cells. My personal take back from this PS was from one of my mentors Dr. Shankar. When I was initially frustrated with the lack of results from my experiments, he sat me down and told me that he had had PhD students who worked under him, who had failed and more importantly learned from those failures for over two and a half years before managing to get results in their last six months, or ended up getting negative results in all their experiments that the project titles that they started with had to be changed to

accommodate the results or the lack of it that had been generated. But he said that the learning that happened during that time would prove more invaluable than the results obtained from the project's success. *This is something I really took to heart.* I consider the fact that I was able to complete my assigned projects or at least take them as far as I was able without getting overwhelmed a personal success. On a completely unrelated note, I was also glad to have been able to participate and complete the TCS 10 K Marathon which I have Beckman Coulter to thank for!

Apoorva Garg   (2014H129010P)

Microparticles (MP) are extracellular vesicles released from the membrane of many different cell types. Their formation can occur because of mainly two mechanisms, cell activation and apoptosis. Since these processes are all involved in the pathogenesis of many diseases including the cardiovascular diseases, the microparticle are assumed to have a role in the pathogenesis of many diseases. Their numbers have been found to be altered in the diseased condition. Current methods used to detect MP and accurately measure MP using flow cytometry are hampered by a lack of standardization. This study is basically to standardize the protocol for isolation, detection and enumeration of microparticles using flow cytometry. This project required a basic knowledge of the principles and functions of flow cytometry. For a person like me, who had only the theoretical knowledge of the field, it was initially difficult to understand the working of the flow cytometer. But Beckman Coulter provides you with a whole lot of trainings before you are actually allowed to work in the lab. That helped me understand the principle in a much better way. Working in Beckman Coulter was an amazing experience. The work environment here is so people friendly and encouraging that you want to put in more than your 100% in whatever work you do. I am really thankful to my mentor who allowed me to make mistakes and then learn rather than spoon feeding everything. Working in a corporate industry brings you one step closer to the real world. During this internship, I got a chance to interact with one of the customers and explain to them my project and the working of the instrument. For an amateur, this was a great confidence booster. In this five and a half months, I could standardize the protocol for microparticle isolation and detection. This is a great achievement for me as I am the first one in the company to do so.

Company: Hyderabad Eye Research Foundation (HERF), the research arm of LV Prasad Eye Institute, Hyderabad

ParthVaishnav (2014H129006G)

It was great!! I have previously worked on completely different domain. This is the first time I have worked on a project based on Protein engineering. I am also feeling glad because I have worked with one of the best scientists of our country, Dr. D. Balasubramanian. It is solely because the faith he put in me and the freedom he has given me, I am able to learn and take this project forward. I have also learnt so many techniques from Dr. Ismail Khan, post doc fellow under Balu sir. So, this internship has helped me to learn experimental techniques and also troubleshoot problems. Human Gamma Crystallin are packed in lens into compact, plastic, elastic and transparent globule of proper refractive power range that aids in focusing incoming light on to the retina. Any single point mutation lead to intermolecular aggregation.

Aggregation causes unpacking of protein which exposes hydrophobic amino acids. So, the project was aimed at inducing mutation and characterizing mutant human Gamma Crystallin proteins: Q101X and E135X. PCR, plasmid isolation, gel electrophoresis, sequencing, chromatography techniques and mass spectroscopy. I have learnt how to induce mutation in a protein, molecular biology techniques like Sequencing, plasmid isolation. I have also learnt chromatography techniques: Hydrophobic interaction chromatography and Size exclusion chromatography. Have hands-on experience on Intrinsic and Extrinsic mass spectroscopy.

Priyanka Bhatia   (2014H129009P)

The project carried out at HERF revolved around the knockout of the retinoblastoma gene, using the gene modification mechanism of CRISPR/Cas9 system. My work involved the validation of the gRNA constructs in a mammalian cell line, such that they can be further used in iPSCs to knockout the gene and create a model system of the disease retinoblastoma. Several courses, both theory and practical, from our curriculum at BITS Pilani prepared us with the know-how to handle problems related to cloning, basics of cell culture, which were an integral component of this project. Other skill sets were developed under the guidance of the scientist and lab members at the PS station. Overall, this has been an immense learning experience, which shall be instrumental in molding future career goals.

Company: Center for DNA Fingerprinting and Diagnostics (CDFD), Hyderabad

Mamta Ganguly (2014H129006P)

In our lab, copy number alteration studies on pancreatic cancer genographs revealed deletion in the chromosomal region 6q 25.3 which might be associated with pancreatic cancer. Therefore, the genes located in this region were mapped. A gene encoding for micro RNA-mir 4466 was found on mapping. Since micro RNAs are known to be robust gene expression regulators, we are trying to determine its role in cancer progression. PS in CDFD was a very enlightening experience. I learned a lot of new techniques like qPCR, transfection and cDNA synthesis. Also, I got over my phobia of maintaining cell lines. I had a very competent guide who was extremely patient with me and always willing to help me. He taught me how to troubleshoot experiments and fine tune my lab skills. The people in my lab were also exceedingly helpful and friendly and made me feel at home. I consider myself lucky to be able to work in such a prestigious institute. It has state-of-the-art infrastructure and excellent lab facilities. This is a very good platform for anyone interested in research.

MVSS.Manjari (2014H129004P)

My project at CDFD was about using the latest genome editing tool, CRSIPR Cas to understand an extremely interesting epigenetic modification. Research in our lab has shown a modification in the

mammalian Histone H3 upon infection by *Mycobacterium*. The mycobacterial protein has been shown to dimethylate the host histone H3 at a particular amino acid residue. The aim of the project is to modify this amino acid residue using the CRISPR-Cas 9 machinery, the latest genome editing tool. This modification would help to understand the importance of the interaction of this mycobacterial protein better and pave way for studying it as a potential target in therapy against mycobacterial infections. A good understanding of Genetic Engineering, Protein expression, Animal tissue culture was required. I acquired these skills in the lab courses at BITS Pilani. From the time CRISPR Cas has been in the news, I have followed every research paper, every article very closely and it has fascinated me a lot. One of the ultimate breakthroughs in the world of Science, CRISPR Cas is something everyone should know of. Every day at CDFD was a challenge, a new experience and abundance of learning. Working with a bunch of highly focused and passionate research scholars has been extremely inspiring. I was lucky to have got an amazing mentor who guided me at each step and laughed off at all my silly mistakes and only encouraged me to do better and learn more. I would like to thank BITS pilani for giving me an opportunity for PS-II at CDFD.

Pandi Srinivas (2010B1PS771P)

Tuberculosis is one of the leading causes of death worldwide. *Mycobacterium tuberculosis* is the causative organism of TB. The primary mode of transmission of *M. tuberculosis* is through air in an aerosolized form, most commonly via coughing and sneezing. Unfortunately, no new effective drug is available for treatment of tuberculosis after the discovery of rifampicin more than 40 years ago. Many of the existing drugs used for treatment of tuberculosis fail to achieve sterile eradication, require long term administration and are associated with high risk of development of hepatotoxicity. Therefore, development of safer and effective drugs or vaccine targets is essential to control this menace. The main aim of my project is to understand the mechanism by which *M. tuberculosis* evades the human innate immune response and survives within the cells and thereby help in designing better drugs for treatment. Many of the skills required for this work like setting up primary and secondary cultures, SDS-PAGE, handling various lab equipment were taught as a part of the curriculum at BITS.By working here, I have had the first-hand experience of designing work flow, evaluating pros and cons of experiments, interpreting the results obtained, using past research articles to design relevant experiments. I got to work with many experienced people working on different topics and I have learned many different things from each of them. I have also had hands on experience of using various types of bioinformatics tools which was kind of new to me and also validating the results obtained through experimentation. These techniques will be helpful throughout my career in research. Even though my work here is for 5 ¼ months, I've obtained some results which can help other people working on this subject.

Company: C.S.I.R. - Central Leather Research Institute (CSIR-CLRI), Chennai

S. Ashwath Balaje (2011B4A1720P)

My PS-2 experience at CLRI, Chennai was a wonderful one. I was given the opportunity to pursue *inter-disciplinary* research projects which involved biochemical engineering as well as mathematics. I enjoyed working in a research-fueled environment with lots of interesting lectures and research ideas floating

around. CLRI has research on multi-disciplinary areas going on at once which was very interesting. There were multiple departments like Chemical Engineering, Environmental engineering, Chemical Physics, Biochemistry, Economics etc., which were working on areas apart from leather research. As with most of the research work, a bit of coding using MATLAB was also useful. I was blessed to have an exceptional Mentor scientist at my PS station and a very helpful PS Instructor who guided me at all times. It was also a very motivating research group which inspired me to work harder to solve the problem given to me and made my time spent at CLRI memorable. Mathematical Model to map enzyme production by yeasts to heat given out during its metabolic activities can help greatly in the monitoring processes of the enzyme Inulinase's production in future. Also it may help in error diagnosis during scale-up of the bioprocess. Experiments using bioreaction Calorimeter have to be run on microorganisms which can yield data to carry out modeling. Controllers have to designed for use in the bioprocess to control the inulinase production which may be extended to other systems as well. Process Dynamics and Control, Basic Biology, Thermodynamics, Mathematical Modelling (course content and research papers). Analytical tools like MATLAB R2012b and MS- Excel, Software-ORIGIN (online videos and official documentation). My experience was very wholesome in that I had a good first-hand experience in a research environment. It was good to gain knowledge of the process that goes into conducting research work. It was also good to work in an academic environment and is a great experience for people looking to pursue research in the form of PhDs or Master of Science degrees. The practical applications of the course content that was learnt, is visible in the labs and it provides deeper understanding of the subjects. It was good to gain knowledge of few software like ORIGIN and MATLAB as well, as these have wide-ranging applications in all fields. I was also able to co-author research manuscripts as part of this study.

Company: Biocon Limited, Bangalore

B.Pragna (2014H108200P)

The overall experience at Biocon Limited, Bangalore, India is great and this is more than what we all expect out of any PS station. I have been working in Analytical Research & Development department as a part of synthetic method development team. These five months gave me a lot of experience in learning many practical things and also it gave me a chance to apply my theoretical concepts. Major part of my project involves method development for determining the purity and content of a drug substance starting from its key starting material till final Active Pharmaceutical Ingredient. Depending on the molecule properties a HPLC method is developed for all the steps of a reaction till the final product. Other than method development we test many other parameters of the drug substance and check whether they meet the required criteria or not. You are not expected to know any software beforehand and training is given when your project is going on. We are given a chance to handle the HPLC systems individually and are also trained to do other analytical tests with proper guidance. All the employees were very friendly and are always ready to help us in all technical issues. The working hours are flexible, we should work for 9hrs a day from Monday to Friday. The work experience at Biocon has prepared me for a future in any other industry. My team members helped me in all the possible ways whenever it is required. They are always ready to clear my doubts with lot of enthusiasm and they encourage me in gaining more technical

knowledge. I would like to roundup by saying that working in Biocon gave me lot of practical knowledge and also the confidence that I can work both individually and also as a part of a team in any other pharmaceutical industry. Our sincere thanks to Biocon Limited for giving us this chance and I suggest this company as a better option to Pharmacy students in terms of gaining industrial knowledge.

Company: Heron, PAREXEL International, Chandigarh

Krishna Kumar Pandey (2014H146212P)

My PS-II station is PAREXEL International, Chandigarh. My experience with this company was great. I have learnt a lot during my PS-II. Company provides great exposure in terms of technical learnings in systematic reviews and meta-analysis. I have learnt various stages of evidence evaluation, acquired skills to perform secondary data search by using database like Embase, Science Direct and Cochrane databases, data synthesis, data extraction and analysis of quality of data of different disease areas like Cancer (glioblastoma multiforme, lung cancer and breast cancer), Post-operative pain and Diabetes. This experience will definitely help me not only in HEOR field but also in other health and pharmaceutical sectors. Apart from technical training, I was also exposed to the high Performance principles followed in the company. My coworkers were nice for the most part of my journey as an intern. It was first time where I applied theoretical knowledge at industry level, faced real problem and have learnt from my mentor and other seniors how to finish the work in time and how to solve technical issue. Daily communication session was amazing experience where I learnt how to deal with client during telephonic conversation and it was great time to sharing the ideas on different topic. My project was "To search and learn Epidemiology-Current datasets (US/Asia Pacific)" in which I searched more than a hundreds of data sets of different disease like cancer, infectious disease, neurological disorder, cardiovascular and respiratory disease in different countries like USA and Asia-pacific region. The significance of the project was a high quality data will underpin the modernization of our national health service, ensuring that it becomes truly patient-centered and clinically led, and which properly measures and improves the outcome of patients, lead to increase patient safety, improve outcome and deliver high quality health care for all.

A.E.C.Vidya Sagar (2014H146214P)

I had a wonderful experience in Heron, a PAREXEL company, Chandigarh. It is a consultancy company which specializes in conducting Systemic Reviews for the clients. My work as an Intern includes understanding the client's requirements and reading abstracts and then full-text of research articles obtained from standard internet databases, then include the articles if they met client requirements or exclude. Further work involves extracting relevant data from the included articles and submit to the client by converting the extracted data into an easily understandable report. The thing I liked the most about my PS station is that the way they have included us in live projects from the day I joined. This act made me to take the work I do very seriously and increased my sense of responsibility from the beginning itself. Other things I liked is the friendly nature of the employees of Heron, including my mentor and my project lead, who themselves are from reputed institutions and talented. I was guided by my mentor adequately

giving me ample chance to find solutions myself, which helped improve my problem solving skills. The work done in my PS station demand a thorough knowledge in the subject of clinical trials and thorough knowledge in medical terminology. The skills I have gained during my PS include using Internet Databases for collecting research articles, understanding client's requirement, conducting systematic reviews, preparing report that suits client needs. Other auxiliary skills I have improved include communication skills, MS Office skills and Team work. I have developed these auxiliary skills by constantly communicating in English with employees and mentors who were experts in communication since they have to deal with International clients. I have also considerably improved myself in using MS Office, since, most my work involves processing the data extracted in excel sheets. I was deeply inspired by the patience my mentors had shown in teaching me the work, the amount of cooperation they provided me in reaching my goals, the way they provided me flexibility in learning things. I will always carry this experience with me in my future dealing with my team mates and juniors. I finally conclude by saying that doing Internship during the final semester of academics greatly improves one's appreciation of the subject he is specializing by experiencing in firsthand the practical application of his subject in solving real-life problems. This provides the ultimate satisfaction in learning the subject. So, I recommend every student to take Practice school very seriously.

Yogesh Vibhute (2014H146217P)

Overall, the experience at Heron Parexel, Chandigarh has been holistic. It is the perfect place to understand the Back end activities of an evidence evaluation and what exactly it takes to serve clients. I can definitely say that this experience has trained me immensely in the skill set, attitude and dedication required to work in corporate life. I have been working as a part of in the Evidence evaluation team. Frankly say that it was amazing learning opportunity to me. The major learning that I acquired with Heron-Parexel, one of most prestigious organization in HEOR field, it divided into two segments The first one is the technical aspect and the second is character building. The technical aspects include handling of database like SRDB and also performing secondary data searching by using database like EMBASE, Science direct, Medline, and COCHRANE and Character building include presentation skill. The PS station strongly creates my interest in evidence evaluation which is very useful to make my carrier in this field. We got to work in a company where we could directly communicate with our Vice-President, Director, and Consultant without any barrier and share our ideas and ask queries. The overall experience at Heron-Parexel, Chandigarh, India was great and this is what we all should expect out of any PS station. I was not just well trained technically but was also exposed to the excellent working standards of the company and optimized working condition, highly qualified and experienced employees (including top level managers) with whom I could share my ideas and take responsibility. My project title is drug reimbursement activity in India in that we search different database to get information regarding health care system in India and medical reimbursement status in India. I also highlighted drug pricing strategy In India and act which control the price of pharmaceutical formulation. Set skill require to implement the project is the you should thoroughly know the searching strategy like key word, data selection, data extraction, different government web site to extract data and I acquire this sets of skill by my regular work on live project because we have same work on live project. Practice school has provided us ample opportunity to implement the techniques learnt in classroom as well as learn new concepts. I sincerely believe that due

to this hands-on experience we are now better prepared for the future and experienced gained here will help in smoother transition from academics. We had a wonderful trip to Triund, Himanchal Pradesh with our colleagues. I just want to say it was a memorable trip and we would cherish it till a long lasting period!

Company: Value Edge Research Group, Noida, New Delhi, NCR

Vyas Parikshit Ganesh (2014H108202P)

The Value Edge has its journey from startup to a Big company after collaboration with WNS Global Solution this acquisition was merely held on February 2016, still getting diluted the firm has preserved its privilege of flexible work environment and Employee Development. Major learning that I acquired in my 5 and half months of exposure at Value Edge are twofold. The first was the Team Management and the second was of Implementing of skill sets. The project I was working on Healthcare Reimbursement Scenario in USA on medical product and devices . The sheer magnitude of the project appeared daunting at first but over time, under the guidance of Mr. Geet Sethi (APM, Marketing Analytics), I learned to focus my problems and solve the problem at hand one step at a time in a swift but organized way. This gave me the confidence that will in the future empower me to tackle any problem at hand. This attitude I feel will be important when I will be responsible for a complete project in the future. In my time here, I learned how to work alongside other people and learned the true meaning of teamwork and how important colleagues are in an office space. From my seniors I learned the way to guide a person working under me. The way my mentor listened to my doubts and provided me with the right amount of help, not too much but just enough to set me in a path of self discovering the solution. I would like to round by saying that working at Value Edge had rescued the fear of work culture of corporate world and induced me with good talents and skills, self-motivation. My major accomplishments include not any medal or certificate but the trust and confidence that my mentor showed in me while doing the work load. My ability to solve the problems in the way advised and also in the time allotted is definitely an accomplishment for me.

Harshita Raina (2014H146207P)

The major learning that I acquired in my 5 and half months of exposure at Value Edge, which is one of the leading consulting healthcare company was competitive intelligence approach in market analysis. The training was not only taking technical aspects into considerations, but personal development and mind makeup too. The technical aspects included clinical research based work. The main focus was on market analysis of various upcoming pharma products and tracking their current scenario as well as forecasting about their future in global market. Along with this training, they taught us about basic and some advanced level of secondary research which could help to dig out about a single product, indication, market scenario etc. The project on which I was working was based on the current emerging approach in Pharma industry for cancer. The main focus was to explore the market related to various cancer indications and their dynamic shift from conventional to recent Immunotherapy approach. This not only helped out to complete my project but also made my mind aware of recent global trends which I suppose

is of great importance now-a-days. Apart from the projects, I learnt some management skills such as team work, crisis management at the time of workload. The company has a good work culture with lots of flexibilities and at the same time seriousness towards work. I learnt how to be patient in completing the required tasks. One thing which I liked the most was direct contact with our associate managers, directors as well as clients. This keeps up to build our confidence to deal with different kinds of people. People working in Value Edge have amiable approach which helped me to clear all my doubts as well as getting acclimatized in office. They treat interns equally as the do for their employees, especially when it comes to help, or sort out any difficult tasks, all here guide as friends. This actually helps to open up easily. I would like to recommend this place as an option for Pharmacy students who want to experience working somewhere you will feel peace and happiness. As many of the pharmacy students don't prefer non-core companies as they are not fully aware of the type of work. I really feel opportunistic to work with such pool of knowledgeable people.

M. Singotam (2014H108201P)

My experience at Values Edge was great and this is what we all should expect out of any PS station. Value Edge is a pharmaceutical consultancy company specializing in marketing and data analysis, with marketing forming the major chunk of it. I worked with competitive intelligence team of Immunology and infectious diseases. I was assigned to the team of neuroscience working in competitive intelligence domain. Competitive intelligence is a self-explanatory term. I can say that it forms the major task of almost all the consultancy companies. The work of our competitors is of paramount importance because it forms the basis of our strategy. I work which I did was multi-pronged- Newsletters, Landscape and Disease overview. Newsletter is a compilation of important news items sent to Roche every week or once in two weeks in some cases. News items are divided into the categories of clinical, Pre-clinical, Biomarkers, imaging and diagnostics, Highlight, Competitive and General. Of these, news items sent in the highlight category are very important. They generally talk about major acquisition or merger, FDA approval of a drug or important results of clinical trials which might have far-reaching effect. Another important competitive work was making of landscapes. A landscape is a diagram showing the clinical phase of important drug molecules- Preclinical, Phase I, Phase II, Phase III or Phase IV. A landscape gives very concise and succinct information from making newsletters and landscapes, making disease overview was an important task. A disease overview gives a brief summary about a particular disease including its pathogenesis, pathophysiology, prevalence and epidemiology, and its management. Disease overview is generally made for rare a disease which is really helpful in making decision related to initiation of clinical research in a particular disease. Apart so that the client can have all the required information in just one slide and can take an informed call whether or not to work on that particular indication. So, considering every aspect, newsletters, competitive landscape and disease overview formed the crux of competitive intelligence work I did in the company. As far as experience is concerned, it was good to put it mildly. My work involved a lot of reading about neurological and neuropsychiatric diseases like Multiple sclerosis, Parkinson, Alzheimer, Amyotrophic lateral sclerosis, Spinal muscular atrophy, Schizophrenia, Major depressive disorder and Bipolar disorder and I enjoyed it thoroughly, neurology being one of the fascinating subjects. The work condition and ambience of the company was quiet good and the people very supportive. They

helped me whenever I required help and guided me whenever they thought it will help me. So, in a nutshell- an experience worth relishing. PS-II helps one to build their persona, knowledge base and interact with industry experts. The experience at PS-II if not affect my future career prospects - has at least made me aware of the current industry standard and situation and that adds to better chances at scoring a workplace.

Company: Decision Resources Group (DRG), Gurgaon

Pragati Tripathi   (2014H147205P)

It was a great learning experience of six month with Decision Resources Group (DRG). I was assigned to the Bio pharma and research operation team of the company. Apart from helping us in understanding the application of core domain knowledge in the various projects, I also learnt about the corporate etiquettes and culture that needs to be adapted. I was working with some of the company's most dedicated and hardworking employees who were really supportive. Different trainings helped me in understanding the whole objective of the project from client's perspective and was able to deliver all the files on proper time. The facilities provided by the companies were really good. I was actively involved in many Fun activities that used to happen on every Friday. The project that I worked on dealt with updating the DRG's forecasting platform with the help of some secondary research from few paid and unpaid databases of the company. Based on the updating news, analyst will forecast that drug i.e. they will predict the future status of the drug in market for next ten years. Second project dealt with patent research. It was dealing with finding the time when the generic drug can enter the market. The whole research was confined to US, Europe and Japan. This project were done to fulfill the Client need. The elective subjects that I took like Clinical research, Intellectual Property rights (IPR) and Quality Assurance and regulatory affairs (QARA) helped me in understanding the aim of the projects that were assigned to me. For example, I was familiar with few terminologies like generics, exclusivity, para IV filing, ANDA, Biosimilar etc. Apart from the core knowledge, knowledge on MS excel and PowerPoint is required for presenting the data in an easy understandable format. The major take back form my internship program is that it widened my knowledge base and helped me acquire knowledge on the patents. Patent searching is an emerging field nowadays. It also helped me in understanding the corporate culture, need of clients for any projects, planning the projects so that I can meet the deadlines. I also learnt a lot from the employees under whom I was working. Working with Decision Resources Group will definitely help me in planning my career more pragmatically. During this time span, I worked on four project (two major and two minor) that helped me to increase my efficiency and understanding. I would say, PS experience is something that every student should opt for as it will add on to their resume and will help them grow professionally.

Company: CIPLA BIOTEC PVT LTD, Goa

Kopal Joshi (2014H129003G)

My experience in CiplaBioTec has been extremely good. I was involved with the API production department of the company and got hands on experience of working with all the instruments and learning all the manufacturing techniques. Everyone, from my mentors to the admin staff, was very helpful and hospitable. I worked on two projects in the company. One was a filterability trial for selection of sterile grade filters used in various processes performed during API manufacturing. This was a scale-down study to determine the minimum area required for the filters so as to achieve maximum filtration for cell culture media, feed and the drug substance before they get clogged completely. The second project was to determine the shelf life of protein A chromatography resin which is used for purification of product. This included an analysis of various parameters such as dynamic binding capacity of the resin, purity of protein etc. I learned about basic chromatographic techniques, basics of downstream purification. Working in CiplaBioTec has led to expansion of my knowledge database and skill set. I got a good idea about how biotech industries work.

Arun Siddharth (2014H129004G)

My experience with the company has been overall pleasant. The company offers a very friendly working environment which leaves an overall positive atmosphere. I got hands on experience inside the production facility along with a good idea of the company policy. The company treated me as an employee, making me take part actively in the company processes. Hence, the learning outcome was immense and I got hands on experience in most processes. I was involved in 2 project works. One was to study the resin lifetime of an r-Protein A resin. The other deals with filterability trials of several filters from different vendors in order to determine the optimal filter and minimum area required for this filter to carry out the company's processes. The resin lifetime study was done by subjecting the chromatography resin to several cycles of usage. Monitoring of the dynamic binding capacity, protein purity and other important factors was done in order to determine the decay of the resin overtime. The filterability trials were done by subjecting the filters to a constant pressure test in order to filter a solution.

Faculty Experience

Brajabandhu Mishra
NVIDIA Graphics, Bangalore

NVIDIA is one of the most important player in producing high performance graphics chips for different devices. The design house of NVIDIA at Bangalore deals with design and verifications of the Graphics chips manufactured by NVIDIA. Apart for the chip design activities, it deals with design and development of the system software for these chips, which is eventually deployed by the OEMS in their products. With a highly innovative, efficient and hardworking engineers, the NVIDIA design center at Bangalore contributes to the overall growth of 'NVIDIA Corporation'. As part of the process of understanding the technical and behavioral adaptiveness of the graduates of BITS with the semiconductor industry, I have identified several areas which needs to be included in the curriculum of the BITS courses. As an initial efforts, these have been imparted to the students through recorded lectures prior to the students start their internship. But I feel, it will be effective only if these topics need to be included as part of regular curriculum for getting these part of the knowledge and behavior of the students. Practice School is the first step for the students to get a feel of the industry. At the same time, I feel it should also be an opportunity for the institute to also update itself to go in parallel with the industry.

Raviprasad Aduri
Cipla Biotec

The following is a brief overview of my experience as Faculty Coordinator at Cipla Biotec Inc. The PS II at Cipla Biotec has started only this semester. The organization is very clear on what they wanted from the PS II. The mentors and HR people are very cooperative. Four ME (Biotechnology) students were assigned for this PS II. All four students went through an orientation and were given couple of projects to work on throughout the program. All four students were offered PPO with approx. INR 500,000 PA package. Following are some concerns/suggestions based on my experience as a faculty coordinator. Transportation from Goa campus to Cipla Biotec is a concern and efforts are being made to take care of this by the company and may be the Institute may also think of this issue considering that the PS II will keep on going. Students were confused between Cipla and Cipla Biotec but this will be clearer from next batch onwards. The company wants to intensely advertise for their PS program across the campuses. This upcoming semester we will have eight first degree students for the PS II and may have more feedback after this semester.

Anita Agrawal
IFB Global, Verna Goa

PS2 is one of the best initiatives taken by BITS where the students get an actual understanding and implementation of the concepts explained in the class. This also gives them a feel of the industrial

environment before they move into it after the completion of their undergraduate or graduate programmes. Myself, Dr. Anita Agrawal, an Asst. Prof. in the dept of. Electrical, Electronics & Instrumentation Engineering at Goa Campus for twelve years, I am also a PS-II mentor at IFB Goa since three years. IFB is one of the market leaders of the home appliances brand in India and are putting all the efforts and hard work to become the first choice when it comes to being an integral part of an Indian household. IFB currently manufactures washing machines, microwave ovens, clothes dryer, dishwashers etc. The Company is committed to provide its customers full satisfaction consistently by delivering high quality products at competitive prices. Appliances are manufactured using environment friendly processes and components. The Quality System of the company is certified as per ISO 9001-2008 by TUV SUD South Asia Pvt. Ltd. IFB R&D team is constantly focused at creating new designs and features to meet customer need and expectations. It is this area where the projects are offered to the students. Most of the projects are based on design and development of new advanced features on the existing washing machines. IFB believes in offering a wide product range to customers so that products are affordable and available for different income levels. Hence before the actual design phase is started, some of the PS-II interns are put into market survey, where they are asked to meet the IFB customers and get the questionnaire answered as prepared by IFB. Their inputs are then passed to another team of interns which are into design and development. The PS-II programme is not only beneficial to the students but also to the mentors who are a part of it. I could get an insight of the working environment in the industries. I get to interact with the industry personnels and discuss with them about the expectations they have from our students as far as the course contents and the knowledge of different tools are concerned. This is then shared with the PS cell through the academic progress report on the PSD website so that the PSD can actually work upon ways and means of updating our curriculums accordingly. Most of the R&D work carried out is based on Electronics. Being a EEE faculty, at times it does become helpful to the students as they can discuss some related topics and problems with me and also study some tools from me which neither they nor their mentors are aware of.

Overall the PS 2 helped a lot in getting good industrial exposure which when used with teaching adds to its effectiveness.

K. Pradheep Kumar
Centre for Artificial Intelligence and Robotics (CAIR)

Centre for Artificial Intelligence and Robotics (CAIR) focusses basically on Artificial Intelligence. It is basically an R&D organization. The vision of the Organisation is to provide technological supremacy for Defence Services for secure communication. The projects of the organization basically utilize technology for the security aspect. I had provided insight to the students on the various embedded techniques and security related aspects. One of their projects was in developing Smart City and also automated car driving condition. Currently these features are only existing in foreign countries. The project works on designing an infrastructure and assess the environment conditions to develop a smart city by using big data analytics and communication through GPRS. The work also decides based on the environment features to design vehicles to decide several constraints like fuel check, external environment sensing, etc I had provided certain essential skills to the students on handling such embedded closed loop systems, designing real time systems, etc. I had also provided illustrations to students on how effective an exceptional handler could be designed to avoid catastrophic conditions based on the environment conditions. The students have also been involved in testing such communications using robotics, which also involves embedded

system design. The students were also involved in such Real time Database and communication. The students interfacing knowledge on bridging the gaps involved in conventional database and operating system design as compared to introducing real time constraints.

Certain essential features on interfacing cloud concepts with big data analytics has been also reinforced in designing such systems. The students skills on data security aspects were also reinforced by providing additional inputs on existing techniques and their pros and cons.

Ankur Pachauri

Reflexis

- Mail/Messaging application
- To automate the existing system of handling Mail/Messaging procedure for checking and responding to problems that occurs at the server
- Build Automation using Gradle
- To automate building, generation and deployment of application on server using Gradle. It is comprises of some set of stages which are: 1. Write Gradle script. 2. Remove ant functionalities, if present. 3. Beautify the script. 4. Add functionality for xml updation. 5. Add functionality for execution of database scripts. 6. Add functionality for minification of js, css, ejs files. 7. Generate war, ear which is deployable on any application server
- Refleis Predictive Analysis
- It enables the store owners to plan and forecast their supplies and workforce for various parts of the year. It uses mathematical model of prediction like Arima, Correlation Analysis and best fit curve to predict the load on the store during various times of the year including outliers like festivals and holidays and even natural calamities. The defining functional effect of these technical approaches is that predictive analytics provides a predictive score (probability) for each individual (customer, employee, healthcare patient, product SKU, vehicle, component, machine, or other organizational unit) in order to determine, inform, or influence organizational processes that pertain across large numbers of individuals, such as in marketing, credit risk assessment, fraud detection, manufacturing, healthcare, and government operations including law enforcement. It fetches its front end data from .json files using angular js. The technologies used in the project use till now ar JSP, Angular JS, CSS3 and HTML.
- Localization of Reflexis workforce scheduler
- It is a tool to manage workforce in any organization, and it forecasts profits and other workforce related data, well in advance for managers to schedule work accordingly. There are various functionalities that are missing in the current version of the project, and our task now is to write restful web services to carry out few of the tasks that would be desired in the next version of the project and to localize the static and dynamic content rendered in the RWS app. It is comprises of two set of stages which include 1. Localized static content of various pages. 2. Localization of the dynamic contents in RWS using a separate table and spring services
- Kernel
- Kernel is the heart of all the products of Reflexis. It is an attempt to centralize every product through a central system. Currently every product has its own set of tools, and access points. Kernel is a means to centralize every application, so that there is no need for separate maintenance of the products.
- Multi Language support for RTM(Reflexis Task Manager)

- To use the RTM in local language of the client this helps. Dailyplanner Planner is a Reflexis product used in maintaining the records of projects. The Dailyplanner contains a series of "blocks" depicting information regarding the projects undertaken or currently active. Currently, the company is planning to use IBM Cognos Reports to maintain the said records, owing to their security and reliability. My task is to get the SQL queries governing the data in the dailyplanner blocks by debugging the code and use them to create Cognos Report Blocks, using IBM Cognos Report Studio.
- Report development using IBM Cognos for RTM applications/Web Application Development.
- Develop advanced analytical reports required by client/ Develop, improve Reflexis Kregistry Application. It is development of reports for RTM version .16/Development of kregistry as per client requirement

IDeaS- A SAS Company, Pune

- Inventory management and Function Space Automation
  In Function Space Automation Comparison of opt_price_smry table with its corresponding benchmark table for every evaluation.
- Recruitment Portal
  To design recruitment portal for company. Mainly for HR team to ease recruitment process. Automate generation of daily reports in form of HTML tables and spreadsheets. Use predictive analytics to compare the progress of process based on existing record and evaluate the interview process capability and to provide the percent of filtration in each stage.
- Web Application for Inventory Management, Support Workbench
  It's a web based application to manage an office inventory. There are separate functionalities for administrator and general users and its main work is maintaining the standards of Internal Tool SupportWork bench equally with main Products.
- Revenue Optimization Android Game
  Development of Android Application for marketing revenue optimization for Hotel business by working on forecasted weekly data and to optimize revenue for the same (Development of interactive Android game for clients to market the revenue optimization process of IDeaS.)
- G3 test Automation
  Currently G3 Testing and regression is done by manual testing and also automating the test suites. Still there is lot of opportunity to reduce the time that is required to do this testing every iteration, which is once in three weeks. In this Project the test automation is improved by following Test Pyramid for G3 Product. This would save a lot of time that would be otherwise be required while doing regression tests for the modules every iteration.

Swarna Chaudhary, Mumbai
Practice school was a wonderful learning experience for the students, as well as the faculty. I was involved in various aspects of the students' work within the organization such as mentorship, guidance, evaluation and work of their day to day work. While working in the Practice School, the students get to work on various live engagements / problems, which are closely integrated with the actual work that a full time employee has to do in the organization. This provides valuable work experience to the students, and allows them to apply the knowledge gained in the classroom. A key aspect of the program is to introduce

students to the corporate work environment, and instil a sense of basic work ethics into them. The students naturally progress towards understanding various aspects of an organization, working in a team, being responsible for relevant work-streams / tasks, and reporting to their managers. Overall, the Practice School is a key stepping stone for students to transition from the academic world into the corporate world. Finally, and most importantly, students are able to closely examine the domain in which they work for 5-6 months as well as the work culture of the organization. This allows the students to make a better informed career choice at the time of final placements. For the faculty, the practice school throws various challenges as well as learning experiences. Each of the five organizations that I was coordinating the Practice School in this semester was working on different technologies / platforms such as Android, Python, Web Technologies, Big Data (Hadoop). Therefore as I faculty, my knowledge was enhanced with respect to the latest technologies being used in the real world. In addition, meeting with the organization, and its senior management provides valuable networking opportunities, and a social interaction experience, which is typically not available in a normal academic role.

P.Srinivasan and Dr.G.Muthukumar
CEG, NBC and Rajputna constructions, Jaipur

In our understanding, the role of faculty for Practice School-II course is not only to monitor the performance of the students, but also gives us an opportunity to understand the industrial problems and correlate the relevance of on campus courses to solve real time problem. Enthusiasm among the industry professionals is observable due to the boom in the infrastructure sector and make in India campaign. Ms. Shreya and Mr. Rahul, M.E. (Structural Engineering) students had an opportunity to work on the new live projects of CEG, Jaipur. Design of bridge structures for the new high ways under constructions with dynamic loading conditions and box type support structures were done by them. The students were very happy about the professional environment and the ambience provided by the company for the excellent learning. Project mentors were present during the final presentation and highly appreciated the work done by the students and offered pre placement offer to both the students. The students could analyze the recent bridge failure at Kolkatta effectively based on the learning for their PS-II project. Estimation and costing is one of the important areas of Civil Engineering. This helps to arrive at the detailed materials requirements, time for completing the project and cost of the entire project. Rajputna constructions, Jaipur provided an excellent opportunity to Ms. Priya and Mr.Mohit the students of Civil Engineering to carry out and determine the cost of a construction projects of new structures and renovation of heritage structures. The model developed by them will be usable for any construction projects by keying in appropriate data specific to the projects. Fatigue crack growth in bearing is an important area of interest to prevent in service failure of the bearings. Concept of linear elastic fracture mechanics taught as a part on campus course offered on Fracture Mechanics was very useful for Mr. Bhargav a student of M.E. (Design) to work on PS-II project at NBC Bearings, Jaipur. He had a wonderful case study to apply the concept of fracture mechanics in a real time situation to prevent the failure of bearings. In brief, we as the faculty of PS-II stations at Jaipur also had an exposure to structural design, estimation & costing and fracture mechanics. We could correlate the relevance of on campus courses taught in real time problem solving during PS-II. The details will be given to on campus departments to explore consultancy projects.

Rekha. A, Bangalore

Practice School makes the student to have exposure to the industry and its need so that they have a smooth transition from academics to the Industry. The Students come from various discipline and work in various fields. By guiding the students from various branches of engineering like mechanical has given me an insight into the nature of work going on and the technology used. The students worked on the Physical design, Product Analytics where various tools were used to extract the meaningful interpretation of the raw data. Some of the other kind of projects were on image processing, tracking of objects in motion, quality and reliability tests for the products, design of thermal management systems, verification, Communication projects like co-existence of wireless devices, performance analysis of cable and satellite systems etc. Interaction with the mentors helped in identifying the skill gap courses and set of basic courses need to work on the projects and the same was communicated to the students to refresh such courses before they join for internship. This helped the students to quickly ramp up with the work and start contributing towards the project. Also shared some of the e-books for system verilog, video basic books.PS II was truly enriching for me as well as I got an insight into the latest tools technologies being used in the industry. Also got insight into the mechanical design aspect in the area of thermal management and various tests involved in determining the quality and reliability of the manufactured units.

Ritu Arora

Adobe, Greater Noida

Adobe is the market leader in image editing and processing products like Adobe Photoshop, Adobe Illustrator and other exclusive products like Adobe Acrobat Suite, Dreamweaver etc. Apart from this, it also develops products like Creative Cloud for teams and other enterprise business products. The students get an opportunity to work on live projects involving various products like Adobe InDesign and Adobe Illustrator, etc. Projects involve study and implementation of efficient algorithms and data structures. It is a great learning experience for students to work at Adobe under the mentorship of excellent, experienced developers who do not foster the principle of a "working program" but an "efficient and excellent quality program" principle. The students are made to understand the existing code and then add/modify the code with the aim to enhance its time and space complexity. Even a nano-second counts. Although most of the product and code details are company's proprietary, with little possible interventions, however, as a faculty I was constantly monitoring the processes followed by the students, discussing algorithms being used by them and analyzing their feasibility. We also explored reasons for choosing a particular algorithm or data structure for solving a particular problem and searched for further possible enhancements. Adobe is a great place to work. The work-life balance is good. A large number of BITSians have settled in Adobe. It is another BITSians' paradise.

Opera Solutions, Noida

Mostly a big-data analytics company, Opera Solutions has been involved in the University-Linkage Programme of BITS for over 8 semesters now. Apart from Data Analytics projects, Opera also offers software development projects involving technologies like Java, Java Server Pages, and Python etc. Mostly operating using Global Software Development (GSD) paradigm, with team members located across countries, students working on live projects get immense opportunity to interact with the team members located in different geographical regions and separated through time-zones. This gives students an insight

into the functioning of the software industry using the GSD paradigm. Being a faculty at this station for many semesters now, I have closely monitored several projects in this company. Projects based on big data storage involve usage of data warehouses and associated ETL (Extract-Transform-Load) process. However, most of the students coming for PS II have not done the courses on Data Warehousing and need to be guided to study further in this domain. I guide them about the relevant topics and resources for them. R language is a common domain-specific language used in big data analytics. This is another area where students lag behind. However, most of them are able to pick the same in a month or so. Overall, Opera Solutions is an emerging company in its domain, with a few BITSians already a part of it.

NISTADS, New Delhi

Being one of the eminent research institutes in the field of Science and Technology, NISTADS offers good research projects for those interested to pursue higher levels of research. Projects ranging from the most talked "SMART CITIES" project to a simple software development project, students did all. Students received immense exposure to vast databases of existing research papers of all domains and were able to filter, gather and organize the required knowledge. As a faculty, I helped students organize the vast collection of research material that they obtained from the subscribed archives. The literature survey was reviewed with proposed creative changes. The software development project was also closely monitored for proposed user interface consistency and implementation.

S. Raghuraman
Vestas- Chennai, MBRDI – Bangalore, Tyco - Bangalore

I handled three practice school stations, Vestas, Chennai, MBRDI – Bangalore, Tyco - Bangalore. Overall my experience is very good and honestly, I was quiet impressed by the sheer brilliance of our students. In the initial days of PS, I had a talk with each one of our students and stressed the importance of gaining much needed practical experience and art of seeking help from others when faced with difficult professional situations. We talked about how to get acceptance by the peers / colleagues in the organization by way of our conduct, knowledge besides our humbleness before our seniors.   It is quiet heartening to note that 6 out of 8 students were given placement in all three organizations and only three could take up the offer as they were placed elsewhere. However I have few concerns about the inclination of present generation of students on excessive reliance on software based solutions even for filtering out very obvious "Need not be considered variables". The art of "guestimation" based on simple model construction needs to be cultivated in the minds of students. I wish best of luck and bright career ahead to those who have completed the PS successfully.

Sreedhar Madichetty, Bangalore
I have had an excellent experience working with students who were coming for their internship at various industries with different back ground. Developing a set of learning goals for a course puts in to a shortlist of real concepts that can guide students and add clarity to teaching and learning. I use to design a learning process for students with clearly defined learning out comes that contribute to a structure that surrounds and can aid in enhancing the assessment. By guiding the students from various branches of engineering such as Civil, Mechanical, Computer Science and Chemical Engineering has given me a very different

thinking perspective. With the interaction of mentors of various industries, made me get in touch with cutting edge of technologies. The project based on renewable energy systems was very interesting because, wind turbines have the highest effective intensity of power-harvesting surface because turbine blades not only harvest wind power, but also concentrate it. I have had an excellent discussions with the mentors who are working on real time projects, for instance with Dr. Rama Krishna, who is a senior engineer at GE working on wind turbine modeling. These are used in in naval system for power generation. Which would treated as clean technologies. Finally, it is a great experience for me and feel more responsible to act as bridge between university and industry.

Surabhi Bothra
National Instruments Systems (India) Pvt. Ltd., Bangalore

National Instruments (NI) Systems, Bangalore is NI India's Software R&D Centre. The main focus is software research either by enhancing existing NI products or developing new features in the NI products. The projects offered by the company are not only challenging but also ongoing critical projects wherein students have to put extensive efforts to perform efficiently. For example, one student was to do research on parallel programming on heterogeneous platform and apply the same hardware for the implementation of the provided application. Even though it's a challenging task to get involved in an ongoing project, with the advent of internet and help of mentors the students have given their best in the projects. As a faculty, I could address the technical issues they were facing. I could provide them with the relevant material to get more detailed information about their respective projects. The students are motivated by getting live project and make sure that they don't leave any stone unturned to complete the tasks assigned. Not only did they complete the project on time but also represented their work to the team members and colleagues, gaining recognition from all. It's a milestone that some of them have been able to start from scratch- learnt a new technology and implemented it end to end. The guidance from the mentors and the atmosphere provided by the organization has been healthy and fruitful. Students have passionately completed their tasks and are contented on successful completion.

Qualcomm India Pvt. Ltd., Bangalore

Qualcomm Inc. is one of the leaders in semiconductor industry which designs and markets telecommunication services. Qualcomm, Bangalore consists of several teams encompassing all stages involved in semi-conductor production (except fabrication). Most of the projects required basic knowledge about Physical Design aspects in the standard IC design flow. Students were assigned different projects from the design, verification and validation methodologies involved in VLSI design. Different tools such as simulators, debugging tools, formal verifiers and hardware accelerators were used across all the projects. Some examples are HSPICE for circuit simulation, Prime Time tool for timing analysis, ModelSim for code coverage. The hands-on experience earned by the students by working on latest technology in Qualcomm has been commendable. One student received the "QualStar Diamond award" for his contribution to the project during this internship. A patent has been also filed on the utility/design and algorithm of the project he has worked on. PS-II bridge gap courses on scripting tools such as Perl was useful for the students. Automation scripting was done by several students using Perl, Tcl and incorporated in the running workflow. With the advent of internet and help of mentors, students have

been able to perform extraordinarily the tasks assigned to them. The enthusiasm of working in the current technology and their work being useful to the organization boosted up the morale and confidence of all the students. They have been highly appreciative of the optimistic environment and helpful mentors and team members during their internship. It has been exemplary that a student has filed patent during tenure of internship. I hope to see some such endeavours in the future as well.

Swapna S Kulkarni
Intel India, Bangalore

"Intel India works in various areas like Motherboard chipsets, Network interface controllers and integrated circuits, Flash memory, Embedded processors, Software development, Biomedical Signal processing, Verification and Validation, Testing and Digital Image Processing and many more. The students are working in various projects like Development of Bluetooth Low Energy Firmware for Intel Bluetooth Controller (Chip), Assisted GPS & GLONASS development will be done for Intel GPS & GLONASS solution, Signal processing techniques to extract ECG in presence of motionnoise, Compressive Sensing, Power-efficient Architectures for Wearable Sensing Systems, Design and verification of leading edge IPs/SoCs and Development of tool for various applications. It was great pleasure to work and guide with students at Intel India. As a faculty, I tried to help students for working of the projects allotted to them with the help of interaction, discussion and taking feedback from students. Based on earlier sem students feedback and interaction with mentors, I shared some documents, articles and reports related to the various technologies like biomedical signal processing, AMBA Protocol and docker container before they start for their projects. I also shared some of my class slides which are relevant to their project area like sensors, amplifiers, digital electronics and microprocessor and programming languages. Since PS II is not only exposure for the technologies in organizations but also personality development for students, I tried to help them in all aspects. I thank to their mentors also who were regularly in touch with me and were very friendly with students. Most of the mentors appreciated BITS Skill gap analysis and gave feedback about other skill sets like scripting languages Perl,Tcl, etc, AMBA protocol, VLSI architecture and mobile Communications. As I also get to know new technologies like Optical Sensing, Sound and Acoustic Sensing, and Xethru which students are learning, this helps me to connect and understand their problems. This also helps me to guide/solve their problems. It gives really a pleasure seeing students progress from scratch to the development of tool or optimization of the code of tool or research in new technologies."

Vishwanathan Hariharan
Amazon

PS2 is an enriching & rewarding experience for students, faculty and the organization. Why do I say so?
Our students get to work on a wide variety of live projects such as highly flexible web applications, mobile phone apps to track the exact location of your order, detecting fraud by web ad hosting companies, performance optimization using NoSQL databases, to name a few.
It is just not exposure to technology and real applications, but PS2 gives opportunity to experience real situations such as project delays due to dependency on other teams and how to address them, safeguarding of data & computing environments and the need to get multiple approvals before one can access them. Students start appreciating the need to put customer

uppermost in their minds, the need to make code easy to understand & maintain through adequate documentation of methods, naming the variables in a meaningful way, indenting the code and sufficient comments for different sections of the code.Overall the students go out of PS2 with a rich experience of technology, business, team dynamics and good practices which are extremely useful in future career.With all this, I too enjoyed the whole experience – seeing enthusiasm of students, seeing the happiness in their faces when they get PPO and of course the wide exposure I myself got. Truly PS2 is a unique & extremely valuable learning experience for students, faculty and the company!!

Pawan Sharma
CEERI, Pilani

CSIR-Central Electronics Engineering Research Institute (CSIR-CEERI), Pilani is a premier research Institute in the field of Electronics, established in 1953 under the aegis of Council of Scientific & Industrial Research (CSIR). It is devoted to R&D activities in three areas, namely: (1) Advanced Electronic Systems: Electronic Instrumentation, Industrial Control & Automation, Power Electronics, Robotics, Image Processing & DSP, Embedded System Design etc.; (2) Advanced Semiconductor Electronics : MEMS, Microsensors, VLSI Design (Digital, Analog, Mixed Signal), Opto-electronic Technologie\s, Photonic Devices and Sub-systems, Nano-electronics etc.; (3) Microwave Tubes: Klystron, Magnetron, Travelling Wave Tubes, Gyrotron, Plasma Tubes, Tera Hertz devices etc. We had only one student, Mr Ashish Kumar, in PSII this time and he was allotted the Embedded Controls Lab under the mentorship of Dr. S A Akbar and Dr. Bhausaheb Botre. The project involved controlling the pitch of the robotic arm movement using a DC motor using microcontroller PIC24FJGA002. It involved simulation and implementation of two algorithms namely PID control algorithm and Adaptive algorithm on the plant. The plant is a solar panel, which was used to control the movement of solar panel and compare the results for the two algorithms based on the parameters like stability, precision etc. Another project that Ashish completed was on Syringe Infusion pump embedded control system and the work was published in 2016 First IEEE Conference on Power Electronics, Intelligent Control and Power Systems. The mentors were very happy with his work. A large number of projects are available in other departments, mainly in the areas of brain computer interface, face recognition, IoT, Zigbee, embedded controls for structural health monitoring systems etc. The students need to have the basic understanding of microcontrollers, C/C++, Python, Embedded C and Verilog to understand and implement the projects. All the mentors are very helpful and provide timely guidance and support to complete the projects.

Hourglass Research, Mumbai
Hourglass is a leading Intellectually Property (IP) solutions provider helping organizations around the world secure, manage and monetize their IP assets. The company caters to a global clientele that includes "Fortune" listed corporations, law firms, SMEs, startups and VCs. Founded in 2010, Hourglass Research aims to help customers gain a competitive advantage by leveraging their IP opportunities. Their main services include Patentability Assessment Searches, Patent Application Drafting and Filing, Portfolio Analyses and Competitive Intelligence, Patent & Technology Landscape Studies, Patent Watch and R&D Alerts. The three students allotted to the station were primarily involved with patent analytics, check filing, IP searching, infringement analysis, prior art search, landscape and portfolio analysis, which involved usage of commercial software from Thomson Reuters. The basic skill set required to do the project was C/C++ and python scripting and identifying the keywords to input the software so as to

validate the genuinely applied patents and IPs from clients. Most of the work carried out by students was confidential based on the requirements by the clients. Mr Ojas, the mentor was very helpful in providing timely guidance and support to the students

Toshniwal Industries Pvt Ltd, Ajmer

Toshniwal Industries Pvt. Ltd. (TIPL), is manufacturing Industrial Process Measurement & Control Instruments since 1959 and offers state-of-the-art technology with systems for all Process Industries. Backed by more than 50 years of Industrial Instrumentation & Security experience, TIPL continuously serve major industry segments within the country with excellent service to & across the globe. TIPL also markets measurement & control instruments along with Security CCTV Systems from the range of reputed and world leading foreign companies. TIPL launched new brand "Avazonic" to serve all type of security surveillance needs of customers. The station was a new one and headed by Joint Director, Mr. D B Mundra, an ex-BITSian and students' mentor. Two students were allocated this station. Just like other organizations, TIPL had very high expectations from the BITS students but allotting the students with a CG below 5 to a new station, whose director happens to be an ex-BITSian, with high expectations, was uncalled for. The project was challenging and required lot of literature survey and technical specification comparison, design, testing, safety regulations, talking with vendors etc for various types of smart pressure and level transmitters. The students did not have much access to defined database and literature and had to stick to random searches on google. The project methodology and plan was clearly defined by the mentor which the students could not accomplish, as per their satisfaction. The communication and presentation skills of the students were also weak. A lot of documentation and books were shared by me to help them collect the required information, personal counselling was done during mid-sem, which did help them but the director was not convinced. I believe, challenging project and over expectations from the company and less competitive students resulted in negative feedback and the station has been discontinued in future.

P.R. Deepa

List of Stations: Biocon Ltd., Beckman Coulter Bangalore Development Center, National Centre for Biological Sciences, Bangalore, Central Leather Research Institute (C.S.I.R. – C.L.R.I.), Decision Resources Group (DRG), Hyderabad Eye Research Foundation, The research arm of LV Prasad Eye Institute(HERF – LVPEI), Center for DNA Fingerprinting and Diagnostics (CDFD), Heron, PAREXEL International, Value Edge India,

Cipla Biotec Pvt Ltd.

The BITS Pilani faculty team comprised of Dr. P.R. Deepa (Chennai), Ms.R. Bharathi (Chennai), and Dr. Raviprasad Aduri (Goa) who mentored the students on the academic learning aspects during their internship. Mr. CR Siju and Mr. SashikanthAkula assisted with the local management of the PS organizations, at Bangalore and Hyderabad respectively. The organizations in the Sciences domain had a balanced mix of prestigious national labs, tertiary eye care hospital associated research foundation, and prominent biotech and pharma industries. Students posted at these organizations during their PS-II are exposed to research techniques, high-end instruments/equipment's, good laboratory/manufacturing practices,research/product development phases and the supporting ecosystems. The BITS Pilani faculty members enhanced this professional exposure of the PS-II students by kindling their conscious learning

process through regular interactions and continuous evaluation components such as reports, quizzes & group discussions,project seminars and viva-voce.Overall, the students during the II semester, 2015-16 had a valuable experiential learning during their final-year internship, with the support of the Organization supervisors and BITS Pilani faculty team. The mentors were also satisfied with the students' performance. Operational as well as specific student-related matters were managed effectively by organizational coordinates (coordinator and supervisors) and the BITS faculty member(s).

Vineet Garg, Assistant Professor
[24]7 iLabs, Pilani

Company is targeting to revolutionize the customer service industry through unified and seamless services and products integrating cloud, mobile and social networking. BITS Pilani students worked across all the domains of the company - data sciences, product engineering and service delivery. Students had opportunities to learn analytics, big data techniques, web development, testing methodologies and software development life cycle. As a PS2 faculty, I had opportunity to meet different company mentors during evaluation components. Some of them are senior company executives. The company environment is very supportive for the students and makes sure that the best comes out in the PS2 duration.

Symantec

The company works in a very niche area of software for security, storage, backup and availability. Managers and mentors encourage students to explore this area and permit time to become comfortable with the domain. Students had opportunities to work in the area of digital certificates, user authentication in the cloud scenario, secure web transactions etc. Students who are looking forward to do their internship with Symantec must be familiar with network security, cryptography, and basic development skills in the web development

---

R. Bharathi

Decision Resource Group (Gurgaon), Parexel (Chandigarh)
Decision Resource Group (Gurgaon), Parexel (Chandigarh) and Value Egde (New Delhi) are companies which mainly focus on projects related to Healthcare analytics and Patent Analysis. Indian healthcare system is composed of hospitals (public and private), medical device manufacturers, medical tourism, health insurance, outsourcing and other allied services. Healthcare Business Analysis brings a new set of capabilities to the organization to make process-centric and data-driven decisions. Be it buying machinery or making an investment or designing a new service or selecting a software, Healthcare Business Analysis holds the key. Decisions Resource Group (Gurgaon), where a set of students did their PS programme were offered projects related to developing better marketing strategies for the Pharmaceutical products. Training sessions were conducted for the students and they were educated on basics of the corporate world like ethics and communication skills and subject knowledge dealing with the research methodology being used by DRG for its products, optimum utilization of data. The major tasks assigned to the students included performing secondary research from various paid and unpaid sources and providing competitive intelligence to pharmaceutical companies by means of an indication-specific report. These reports cover everything from pathophysiology, etiology, current therapies, and emerging therapies to disease

landscape, unmet need and market forecast for a particular disease and identifying pipeline molecules and thorough studies on patents and exclusivities governing the molecules. The project involved thorough understanding of each of the indications of a particular drug for a disease along with a basic knowledge of intellectual property rights and regulatory framework governing the health care system.The other projects in which students worked at DRG and Parexal, include performing secondary research from Company's proprietary data and open sources to understand the pharmaceutical market and biopharmaceutical products and also to generate data for assisting the therapy analyst. The secondary research included LAMP (Label Analysis and Monitoring Platform), Patent research and KOL (Key Opinion Leader) identification. LAMP is a multi-client subscription service from DRG which primarily compares drug labels as well as the label claims extracted from the labels across various geographies and therapeutic areas. This project gives an overall structure about the therapeutic areas covered by each drug product, the addressable population, adverse events, warnings and precautions that are to be taken care while administering the drug. Patent research involves the estimation of generic entry date of drug products that ultimately gives an idea to the clients about the competitive drug launch into the market. KOLs are the medical practitioners, expertise in a particular medical field and actively involved in research. KOLs are the great source of information on diseases and therapies.

Value Edge

Value Edge is a Business Research and Analytics firm that specialize in providing high-value customized business research, intelligence and analytics reports and databases across pharmaceutical, biotech and medical devices domains. It has now been acquired by WNS Global and will be the healthcare arm of WNS. The projects offered to students mainly dealt with market analytics and they worked on market assessment, Competitive Intelligence and Forecasting. Market assessment involves market area and disease area assessment in which they assess the epidemiology, competitive landscape, pipeline analysis, launch uptake, in/out-licensing of products. In competitive intelligence, Information addressingspecific key intelligence questions were provided to the client (Pharma companies) by collating secondary data. Students were also trained in preparing Newsletters. Newsletter is a compilation of important news items in the categories of clinical, Pre-clinical, Biomarkers, imaging and diagnostics, Highlight, Competitive and General. Another important competitive work offered to students was preparation of landscape reports. A landscape is a diagram showing the clinical phase of important drug molecules- Preclinical, Phase I, Phase II, Phase III or Phase IV. Students were impressed with the level of various training sessions provided to them on corporate etiquettes and their knowledge on MS- Excel, MS- PowerPoint, MS- Word, has improved a lot. With regard to the technical knowledge gained they are very confident speaking about the Biopharmaceutical industry, Clinical research and IPR & Pharmaceuticals. Further, their exposure to market assessment, competitive intelligence and market forecast will enable them to pursue career in health care analytics and market research.

EDITORIAL TEAM

Mr. S.Raghuraman

(Core Engineering)

Mr. Anjani Srikanth Koka

(Economics Finance & Mangement)

Dr. P.R Deepa

(Biological Sciences)

Mr. Pawan Sharma   Ms. Surabhi Bothra   Ms. Uma Maheswari Natarajan   Mr. Vineet Garg

(Electrical & Electronics Engineering)   (Computer Science and Information System)

Prof. K.R Anupama

(Associate Dean, Practice School Division)