



Jan 2021

NewsLetter



Every decision brings with it some good, some bad, some lessons, and some luck. The only thing that's for sure is that indecision steals many years from many people who wind up wishing they'd just had the courage to leap.

DEPARTMENT
FOR

MECHANICAL engineering

Key Points

1. Online Sem Policy
2. Department Events
3. Tech Teams
4. Univ Intern Q & A

Ahoy readers !

Firstly, thank you for pausing from your busy day and going through this year's edition of our department newsletter. As you already know, the year 2020 has been a rollercoaster ride for all of us with numerous things happening and changing simultaneously. Keeping that in mind, we tried to keep the newsletter as exhaustive as possible including various things happening in as well as related to our department.

The initial part of our academic year was very much influenced by the policy changes adopted by the institute due to pandemic which is to the hilt what we have tried to cover in the foremost article. We have also summarized about the four most worthwhile events which happened in our department this year which include 'Department Valedictory function', 'PG orientation', 'Sophie weekend' and 'Research Mania'. Even though spanning over 2 days with a diverse set of events, we briefly articulated about 'Sophie weekend' and how it helped the sophomores to get amicable with our department.

With the motive of encouraging more students towards the research in Mechanical Engineering, we have also interviewed a student of our department who has done a foreign university internship! Do not forget to go through his experiences. As always, we have also covered a few tech-teams and their recent work. Last but not least, we also penned down about our official blog and would really insist you to go through it. Enjoy the newsletter, cheers!



Online Sem Policy

Mumbai being a SARS-CoV-2 hotspot in the country, our Institute also had to make some crucial decision to adopt a policy for closure of Spring Semester 2019-20. It was a necessary decision and of course need of the hour, one may say taking into account the situation of graduating students and the disturbance in the upcoming year's academic calendar. Many of the American as well as European universities had already made their decision regarding the closure of the semester including the delivery of the instructions for further semesters too.

For this purpose, two e-Senates were conducted on April 24, 2020 and May 11, 2020 respectively and various issues regarding the academic closure of the semester were discussed. Also, to take into account the opinions of all the people, two surveys were conducted separately, one for faculty members and one for students, which was also presented at the senate. After considering various motivations and examples, conserving the balance between the independence of an Instructor about a course and needs as well as aspirations of all categories of students, decisions were made by the Senate.

Closure of the Spring Semester 2019-20:

1. Spring Semester was closed without requiring students to return to campus. Final grading was finished till 30th of June 2020 for all the courses (including Theory /Lab/ Seminar/ Projects).
2. Students were provided with an option of dropping a course without W grade appearing in their Transcript till May 30, 2020.
3. Theory and Lab courses were graded on the basis of evaluation done till the Mid-Semester examination (incl. Midsem too).
4. Even though grading was done only based on evaluations till midsem, Instructors had also been provided with the freedom of additional evaluation using a suitable online mode for 20% of weightage given to them at maximum. Although Instructors were mostly lenient, the final decision was theirs to take for a course.
5. According to the recommendations by DUGC/DPGC, the courses which didn't have enough in-semester evaluations were considered ungradable and removed from the credit requirements.
6. All the seminar and project courses were evaluated via VC mode and their grading was done by 30 June 2020, except in cases where students were given extension to complete their projects.

7. First year PhD students were allowed to complete their credit requirements till the autumn semester 2020-21. In consideration of availability of all the facilities such as remote use of IITB Library, online submissions of pre-synopsis and thesis etc. PhD students were allowed to avail these facilities after consultation with their Supervisors and RPC members.

8. Summer Term (i.e. 2019-20) courses were continued to run in online and self study mode, specially for Final and extension year students. Their respective grading was shifted till 30 June, 2020.

The famous Satisfactory (S) grade:

The special S Grade is a Place-Holder grade which depicts a PASS in a course, which contributes to the credit requirements but not for the CPI/SPI calculations of a student. Many of the universities across the globe adopted an academic policy consisting of a 'S' grade or grade similar to the satisfactory grade which in turn was the primary motivation behind its adoption in our Institute. An article was published about the S grade and its global counterparts by Insight, IITB which can be found [here](#).

Our Institute adopted S grade in the academic policy in following manner (i.e. set of rules):

1. Instructors were given a right to decide a scheme to be adopted in their respective courses from the following two schemes:
 - a.) A reduced scheme of Grade (i.e. S and FF)
 - b.) A full fledged letter grade (i.e. AA-DD and FF)
2. Grading was done for the full credits of the courses with an option given to students to replace an awarded letter grade (i.e. AA-DD) into S grade for multiple courses.
3. II and FR grades were scrapped from the grading policy for all the courses and a restriction of inconvertibility of FF grades into S grade was also imposed.
4. Students who were awarded an S grade or who voluntarily opted for it, will be given a chance to convert it to a letter grade by giving a 100 marks examination later, if s/he wishes for it. This is supposed to be done for all the courses latest by the end of Spring semester 20-21.
5. As mentioned above, a PP grade would be only counted towards the credit requirements and not for the CPI/SPI calculations.

6. If a student doesn't appear for the aforementioned 100 marks examination, the S grade will be directly converted to a PP grade and for graduating students, this conversion from S to PP also took place where it was not possible to conduct a 100 marks examination before their graduation.

7. This 100 marks exam was also for students with FF grades, to convert their FF grade into a DD grade, as per the grading policy imposed by the Individual Instructor, of course. Failure in giving the exam will result in conversion of FF grade into an FR grade.

8. It wasn't permitted to opt for an S grade in any of the Seminar or Project based courses.

This was the general idea and structure of the Academic Policy adopted by the Institute. However, there may be cases where Instructors have opted for a slightly different way of Grading without violating the compulsory policies as mentioned above. Overall, there were many pros and cons of the above decisions which reflected in further academic activities but it is important to note that on a wider scale and for greater good of all the students, it was the appropriate decision and a right thing to do as well.

Department Events 2020

PG ORIENTATION

The institute conducted the freshers' orientation for the PG newcomers on the 10th of August, introducing them to various opportunities on the campus and in the mechanical department. The orientation which marked the start of the online Autumn semester 2020 was held online on Zoom and was hosted by Poorvank Sharma. All the technicalities of the orientation were managed by Prof. Alankar throughout the session.

The event commenced with Prof. Sreedhara Sheshadri, HoD, Mechanical Department addressing the students, congratulating them on beginning yet another journey in their life.

Shortly after, Faculty Advisors of the department spoke about the opportunities in academics namely institute and department electives, workshops and Student Reading Groups that students can engage in. As this is the first time the campus is conducting an online semester, Prof. Neeraj Kumbhakarna took a couple of minutes to explain and clear any doubts regarding the online platforms to be used and other logistics of the semester.

This was followed by a presentation by PG representatives Manthan Dhisale(PG Nominee), Chinmay Gandsreewar(PG Sports Secy), Anish Thakur(PG Cult Secy), Maitreya Sinha(AURAA, Mtech),

Anish Ranjan(AURAA, PhD), Jignesh Nakrani and Anil Kumar(Department Coordinators, IRSC), Supriyo Roy and Pratik Danger(Department Coordinators, ISCP). They talked about the role of PGAC(PG Academic Council) and other institute councils. They also discussed about the goals they have for the department as a council and how they plan to achieve it.

Soon after this, a Question and Answer session, co-hosted by Mr. Soham Pendurkar was held where students could clarify any queries they had regarding academics or challenges in the current semester.

The orientation ended with professors from all the three specialisations addressing the freshies. Prof. Salil Kulkarni and Prof. Shantanu Tripathi from design stream, Prof. Amit Agrawal and Prof. Arindrajit Chowdhury from Thermal stream, Prof. Asim Tewari and Prof. Makarand Shrikrishna Kulkarni from manufacturing stream spoke about the opportunities in CADA, TFE and CIM respectively.

SOPHIE WEEKEND

How well can I make the most out of my second year as a student of Mechanical engineering?"

"What are the research opportunities that are available to me?"

Stepping into the second year of studies, many such questions pop up in a student's mind. To answer such questions, an event exclusively meant for the second year students, had been arranged on 12th and 13th September 2020.

The event began on Saturday, 12th, with a fun start comprising of entertaining questions and polls allowing everyone to reminiscent the past offline semesters. Then there was an interactive session with the Faculty Advisors of our department, who answered many questions like how to handle the increased difficulties in the online semester and gave tips for better time management. They also talked about their research and on that note advised the students on how to start taking part in research projects.

On Sunday, 13th, "Know the Knowledge", an illuminating session exclusively on researches was conducted. This event had three esteemed professors from our department— Prof. Arunkumar Sridharan, Prof. Shashikant Suryanarayan, and Prof. Asim Tewari.

They gave an insight into their field of research and their work so far. They also shed some light on their professional journey. This was followed by answering the questions of the students like how to get started with projects without any prior experience, and how to get opportunities to work in core projects specifically. They also gave advice on research interns and the future of the evergreen department of Mechanical Engineering.

The Sophie Weekend left the students with some much needed information for effectively utilizing their second year. Moreover, they got many interesting accounts of research being done by the professors and the idea of how to get started with their own research projects.

DEPT. VALEDICTORY FUNCTION

Department Valedictory function is an important rite of passage for our students, who may be leaving the campus, but will always be a part of the IITB family. This year due to the unexpected worldwide pandemic, it was via online mode on 20th July 2020.

The event started with words of Professor Sreedhara Sheshadri, Head of Department Mechanical Engineering (2020-21). It was followed by a wonderful speech given by Professor Balchandra Puranik (2019-20). This year Prof. A Jaganmohan awards were declared in the Valedictory function itself after a brief introduction given by Gaitonde Sir. Prof. Puranik did the honours. Prof. Asim Tiwari shared his journey with the students, professors and honourable guests for the event. With him, Professor Tanmay Bhandakar also shared his journey and a few words of wisdom.

Department council formed at the beginning of every year consists of hardworking and enthusiastic students willing to put immense efforts for the department. They indeed did a great job and have set an example for the next council. We sincerely acknowledge their dedication and efforts.

Department general secretary Kinjal Saxena shared her experience of the tenure and department.

To add a bit of liveness to the event, Radha Lahoti, a 4th-year B.Tech student performed a wonderful song. After the commendable performance, we moved forward to Department UG and PG awards. The awards were presented for the following categories- Overall outstanding student, Academically outstanding student, Organisational role of honour, Organisational citation award, UG research award, PG research award, Organisational colour award, Organisational special mention, Technical colour award, Technical special mention, Cultural colour, Sports colour award and Sports special mention.

We also had music performances by Bitthal Parida and Aman Kumar, second-year B.Tech students. Willingly or unwillingly, saying goodbye is one of the most difficult things in life. It is unfortunate that their last semester in the institute ended so abruptly. We wish them all the very best for their future endeavours.

RESEARCH MANIA

LATEST FROM THE BLOG

Recent Contributions

A New View to 3D Printing-Process Applications and Limitations

Yash Gopal Mittal Department of Mechanical Engineering, IIT Bombay 3D printing (3DP), as the name suggests, is a manufacturing process that enables physical or 3D realization of a computerized model.

This is a common online platform for scientific and research orientation contents of Mechanical Engineering and allied fields.

Website: <https://memeiitb303483862.wordpress.com/>

The inauguration of the research blog

An informative event to attract the tech enthusiasts of the Department of Mechanical Engineering was conducted under the name: Research mania.

This was a culminative event that included the inauguration of the Student Reading Groups (SRG's) and the inauguration of the official research blog of the MEME team of the Mechanical Engineering Department.

The key speakers of the event were:

1. Rucha Desai: Our Department General Sec. She inaugurated the event and gave the starting talk
2. Manthan Dhisale: Our PG Nominee. He Inaugurated the SRG and gave a very nice talk on Industry 4.0
3. Gaurav Kumar: Our PG Editor. He inaugurated the research blog and gave the info talk on how everyone can contribute to the blogs and the official newsletter of the department.

Tech Teams of IIT Bombay

Mars Rover IITB



The IITB Mars Rover Team, a part of the Mars Society India (MSI), is a team of space enthusiasts looking to build space grade technologies for future manned missions to Mars. The primary goal of the team is to build a robust, all-terrain and remotely operated rover for Martian exploration.

The Team was established in 2012 with the objective of working towards building technologies for manned missions to Mars, and inspiring the youth towards space exploration. It paved the way for a rejuvenated community of space enthusiasts in the institute. The team has been working on rover prototypes for participation into URC (University Rover Challenge), an annual competition held in Utah, USA, since 2014.

The team mainly participates in two rover challenges: University Rover Challenge (URC) organized by The Mars Society annually at the Mars Desert Research Station at Utah and the Indian Rover Challenge (IRC) organized by The Mars Society – South Asia annually at different places in India. These competitions provide a well-defined problem statement for students to work within a defined timeline and come up with an end-to-end working prototype.



The team consists of budding engineers, ranging from various departments and study programmes offered at IIT-B, working to gain hands-on knowledge about development of all-terrain rovers and space biosciences.

Mars Rover IITB continued



The current iteration of the rover has a 4 wheeled rocker bogie based suspension system modified to fit specifications. It rests on four toughened rubber balloon wheels, which provide grip on sandy and slippery surfaces and suspension from shock.

The team stood 4th out of 28 teams participating from 7 countries in the Indian Rover Design Challenge 2020 where they had to design a rover taking into consideration Martian conditions. The team was also selected to compete at URC-2019, with a ranking of 20 amongst 84 participating teams worldwide. The team secured the highest points in the SAR acceptance round in IRC 2019, and qualified for the main event securing 20th place among 84 participating teams in URC2019 in the SAR phase. IITB Mars Rover Team has also been to Mars Analogue Research Station in Arkaroola, Australia where they tested their 6-wheeled rover.

The team consists of mainly four subsystems:

1. Electrical and Software: Electronics and Software Subsystems roughly comprises of following areas: Control of arm and steering, autonomous navigation, base station GUI, Wireless communications, Power Distribution and Battery Management System.

2. Mechanical: Mechanical Subsystem roughly comprises of Robotic Arm and End Effector, Suspension, Bio-Assembly, Wheels and Chassis. It strives to build a robust system which can not only perform the necessary tasks, but also traverse through rocky Martian-like terrain.

3. Biosciences: It mainly comprises of Life Detection Tests, Bio Sensors, Sample Collection, Geological Survey. Preliminary tests for moisture, temperature, and methane content are performed using integrated sensors. Microscopy technique is executed on rover to observe presence of bacteria using gram staining method, further quantifying the observations using image processing. In-situ visible and UV range spectrometry is used to identify the presence of biomolecules like proteins and ATP in the sample. New techniques such as microfluidics are being explored as potential on rover bioassay methods.

4. Design and Logistics: It mainly comprises of CDR Video Shoot, Webpage Design, Shipping Arrangements, Sponsorship and Funding, Travel and Visa Arrangements.

IIT Bombay Racing



IIT Bombay Racing is an entirely student-run team that is continually developing new solutions with one single goal in mind: to make an efficient electric race car, that is to "Revolutionize Electric Mobility in India". It is the premiere Formula Student Electric Team.

The team had started its journey in 2008 with Vayu which took part in FS Michigan and was the best New entrant among 25 new teams. Since then the team has never looked back and its achievements continue to motivate the next versions to get bigger and better! Agni, Prithvi series, Evo series and Orca all have been one better than the other followed by EVoX and the all new EVoK. And recently the team has made an outstanding leap in its achievements with victory in the Engineering Design Event of the Formula Student UK Competition of 2020, also becoming the first team in India to win the Engineering Design Event in an international FS competition, with overall 4th position in FSUK 2021. This year the competition was entirely virtual, because of the COVID-19 pandemic. Also the team had an addition to its list of sponsors-the stakeholders, MAHLE group, the German Brand. This recent leap in the team's achievements was noted by a lot across the globe. Also, the team has won the Formula Student Award by IMechE for being the best non-UK team for 5 consecutive years.

The pandemic has hit the process of reaching their goals in many ways, and the team members are tirelessly developing ways to work around it. Building a Racecar consists of several complicated steps, including ideation, design, development, and testing. Each of these steps requires

tremendous amounts of collaboration from several groups of people, including judges, experts, past and present team members, critics, observers and so on.

Currently, the team has been working towards the ideation and development of their next project-E13, with which they are planning to participate in FSUK 2021. Also the team has taken part in Formula Bharat Competition 2021 with the currently developed vehicle model E12, and has qualified for the finals.

This work-from-home environment has allowed the team to rethink the design through a research lens, by investing a great deal of time to research and identify alternative and innovative solutions for various parts of the car, e.g. research in carbon fibre monocoque chassis, regenerative braking, in house developed motor controllers, along with design and software validation, the team is focusing on improving the Statics side of the team, namely business and cost models, which can be seen by the results.

While the pandemic has had a debilitating effect on every aspect of our lives, the IIT Bombay Racing team has found innovative ways to continue its mission to build India's fastest electric race car. Kudos to the effort of every team member, past and present, and the mentors for their dedication and persistence to make this happen. The team has been the pride of our nation and the institute and is keeping up to the legacies every year with hardworking and enthusiastic teammates.

Autonomous Underwater Vehicle



Team AUV comprises of enthusiastic and hardworking students from inter disciplinary backgrounds ranging from freshmen to driven senior undergraduates and tech experienced post graduates at Indian Institute of Technology, Bombay. With expertise and experience of 9 years, they have achieved considerable mastery in making autonomous underwater vehicle.

The team works towards participating in 2 competitions- AUVEI RoBoSub and NIOT SAVe. The goal of both the competitions is to develop an AUV capable of completing realistic missions underwater. The tasks are designed so as to simulate the real life problems faced by the navy during rescue missions and underwater exploration. This draws upon expertise of the areas of engineering provided by multifaceted team.

The team works under four sub-divisions; Mechanical-responsible for bringing all mechanical advancements in the vehicle to solve a particular problem, Electrical-responsible for handling electrical requirements of the Sensors, Thrusters, On-Boards Computer, Cameras and more, Software subdivision that writes 15,000 lines of code to make the AUV autonomous and lastly the business subdivision which is responsible for handling the non-technical aspects of design, marketing, media, events, web and public relations.

Matsya-1, being the first attempt to build an AUV, the team focussed on integrating mechanical, electrical and software aspects. The team won the RoBoSub 2012 being the lightest AUV consecutively second year in RoBoSub 2014.



Matsya-4 was developed with double the endurance of Matsya-3. Matsya-5 was built with modified vision to detect multiple tasks simultaneously.

Matsya-6 is the latest in the series of autonomous underwater vehicles (AUV) developed by the students at IIT Bombay. The team made it to the top three in the presentation category on August 30, in RoBoSub 2020.

Underwater research is a field explored very little in India. In that scenario, IIT Bombay's robotic team AUV-IITB has created something no-one has truly accomplished before by developing an autonomous underwater vehicle. The AUV-IITB team has evolved quite a bit through the years and their performance is reflected in their performance at the top competitions.

Unmesh Mashruwala Innovation Cell (UMIC)



'Unmesh Mashruwala Innovation Cell', widely known as UMIC, is a tech team working towards the motive of embracing, developing and executing the idea of an autonomous future. The team consists of 40+ persistent and motivated students across various fields of study from IIT Bombay.

UMIC functions and works according to the principle idea of simultaneous existence of Humans and Machines and co-working and developing automated prototypes to make the world a safer and more sustainable place. The primary area of focus for the tech team is developing autonomous vehicles. The team is mainly divided into 3 sub-teams according to the different areas of focus and the respective competitions.

AeRoVe

With the increasing demands and necessities of drones for incapable of working efficiently. Team AeRoVe is in the constant pursuit of developing an ultimate system of

autonomous fixed-wing as well as multirotor aircraft. The team majorly focuses on two competitive problem statements, the 'International Aerial Robotics Competition (IARC)' and the 'Barcelona Smart Drone Challenge (BSDC)'. Team AeRoVe has chased the Mission 8 of IARC since 2018. Presented with the "Best Presentation Award" in Mission 8 of IARC in Beijing, China. Participating for the first time in the Barcelona Smart Drone Challenge (BSDC) in its 2020 edition, the team AeRoVe has been working towards autonomous fixed wing vehicles since December 2019. After successfully completing the two ("Concept Review" and "Preliminary Design Review") out of the three review rounds (required to be completed before participating in the final competition in Barcelona), the team is continuously adding to develop a rigorous system of autonomous fixed-wing aerial vehicles.

UMIC continued**SeDriCa**

The team SeDriCa aims to develop India's first self-driving car, trying to achieve Level 5 Autonomy, capable of autonomous driving under Indian Road Conditions. The team works for two competitive problem statements, 'Mahindra Rise Challenge' and 'Intelligent Ground Vehicle Challenge'. The Mahindra Rise Challenge envisaged developing a working unit of a 'driverless car' for Indian conditions under an intra-city situation on paved roads. As a part of the competition, the team launched India's first successful prototype of a driverless car. The team received a Mahindra E20 model to test its driverless car technology which was given to the top 11 teams out of 259. Right now, the team is working remotely to develop the various aspects of the car, including Controls, Motion Planning, Perception, and Localisation. The developed software will be tested as soon as offline work is resumed. IGVC is an annual international robotics competition for teams of undergraduate and graduate students co-sponsored by Association for Unmanned Vehicle Systems International (AUVSI). The team globally stood fourth in the basic and fifth in the advanced Auto-Nav challenge in 2016. Improvising on the various aspects of the prototype, next year, the team emerged as the overall winners in IGVC 2017 in the pool of 29 participating teams from 5 different countries, securing first place in the Autonomous Navigation Challenge, second place in the Design Challenge, second place in the Interoperability Profiles Challenge.

ASME-SDC

ASME stands for the American Society of Mechanical Engineers. It organizes the Student Design Challenge (SDC). The problem statement is carefully devised from real-life applications. Each team is expected to ideate, design, construct, and operate a prototype that provides solutions to all these intricate problem statements stated. Qualifiers are conducted in Asia-Pacific region and finals in the US. The team was Asia-Pacific region champions in ASME-SDC 2019 and World Champion in ASME-SDC 2017.

Apart from these competitions and challenges, the team also organises and participates in various events such as Tech & RnD expo organised by Institute Technical Council, IITBombay and Techconnect - Techfest International exhibition. An aerial robotics workshop was organised by UMIC in collaboration with the Aeromodelling club which saw 100+ participation. The team also works in many different projects too such as Backpack Rover, EATV, Self Balancing Arm, Indoor Navigation Robot etc. UMIC also launched their revamped website with extensive information about their work. From tinkering to Technovation and from ideation to execution UMIC never fails to contribute to the innovation in the field of autonomous and sustainable world.

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Virtual University

Virtual university internship programs allow students to gain work experience in a remote setting. On-campus foreign univ interns were not possible this year due to the COVID-19 pandemic. As disappointing as it seemed to the students, in the beginning, it must have been a totally new and unique experience, along with a lot of new lessons and pathways opening up for them.

To throw some light on it, we have **Ayush Agrawal**, a fourth-year student from the mechanical engineering department. He did his third-year summer internship through the MITACS Globalink Research Internship program. He has shared his experience along with answering a few common questions that might help univ intern enthusiastic students.

Q. How and when did you realize that you had an interest in the specific field of your internship?

Ans. I realized that I had an interest in material modeling and simulation in my fourth semester. There was this course on Strength of Materials by Prof. Dnyanesh Pawaskar after which I was inclined more towards this field. The course was a bit involved as it required finding solutions to partial differential equations which at first appeared out of scope to most of the students. Those who actually appreciated this part of the course found that they have gained insights into computational solid mechanics and in some sense understanding of how FEM algorithms work. Well, I was able to realize it and hence found myself interested in theoretical system modeling and FEM. My interests were further boosted by the courses on control systems (it is typically applied linear algebra) and robotics.

Q. What was the process for applying for your University internship and a few mistakes which should be avoided while doing the same? Is there any right time to apply?

Ans. To get an internship in Canada, one needs to apply to a program globally known as MITACS Globalink Research Internship. I would recommend interested students to apply to this program from the day its portal opens. As the application is a bit lengthy and it will take time to scan all 2000+ projects and find a suitable one as per your interest. The application starts in the first week of August and the deadline is the second or third week of September. Students should utilize all the days in between to make their application close to an ideal one. This is something that I did to leave no holes in my application.

Also, the selection for this program is not done by the professor. It is done by the organizers of MITACS. They have this straightforward way of selecting those students who have some prior experience in the field of the project they are applying for. For example - you have done a project in Fluids but you applied for a project on Humanoid robots, there is a very low probability that you will even get shortlisted. Hence, you need to choose wisely or rather plan your 7 project preferences in a way that they include both your "aspirations" and "your experience".

Q. What technical skills were considered as pre-requisites for your internship?

Ans. In the application, the candidate is required to make 7 project choices. Each project has a very detailed description of what skills the applicant should have, what is expected out of the project, what are the minimum requirements for the project under which the candidate will be considered for further stages of the selection process, etc. The applicant needs to check these details for all the projects he/she is interested in applying for.

Q. What to expect from a University internship and how are the skills learned in the process beneficial?

Ans. Since I am writing this for students of IITB, I will write about "Foreign University experience". Well there are lots of benefits of doing a University Internship and I am listing them below as points:

1. You will get foreign exposure which companies in placement appreciate a lot.
2. Along with technical and analytical skills, your acumen for approaching problems will become better.
3. Language of communication is primarily English in foreign universities. Getting some experience, one can learn to control his/her elements of speech and also learn effective communication skills. I strongly feel that this experience helped me a lot to improve my soft skills.

Q. What are your takeaways from your experience?

Ans. I will answer this in points:

1. 110 days of incredible research experience.
2. Developing the ability to do independent research.

3. Realizing that I am made for research and hence started to look at the Master's program.

Q. How was the virtual internship different from a normal one?

Ans. As far as your work is computational, you don't feel anything different. But yes, you need to keep yourself motivated all the time as at home you don't get the feel of the workplace (no vibes of a foreign place either). You need to force yourself to a schedule in order to meet the expectations of the supervisor because, in the end, they are expecting a LOT from your work. Also, you need to make yourself available for meetings as per the time zone of that nation.

Q. What is your message to students who are willing to do a University internship?

Ans. Applying for an internship at a foreign university is a very long and tedious process but I must admit that it is a rewarding experience. Doing an internship at a foreign university is not just about working abroad but working with people of different cultures and backgrounds, interacting with them; making you more adaptive and more open minded for new ideas.

Applying for a University internship over grabbing a quick internship from the placement cell which sometimes also ensures PPO, is a tough choice but it requires you to have the appetite to explore something to its core, and in my opinion, once selected you will be more than satisfied with your decision.

We are thankful to Ayush, for taking out time to give us an insight about virtual university internship, application procedure, and share his experience of working from home.

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SECOND Year CR