

Scholastic Achievements

- Secured **94.27 percentile** in JEE Advanced 2018 given by over 0.25 million students from the country.
- Secured **98.61 percentile** in JEE Mains 2018 given by over 1.2 million students.
- Secured **State rank 19 and Olympiad rank 175** in International Olympiad of Mathematics (Level 2) conducted by SilverZone Foundation. (2016 - 17)
- Secured **State rank 39 and Olympiad rank 337** in International Olympiad of Science (Level 2) conducted by SilverZone Foundation. (2016 - 17)
- Secured **State rank 54 and Olympiad rank 123** in International Olympiad of Mathematics conducted by SilverZone Foundation. (2016)
- Secured **State rank 46 and Olympiad rank 448** in International Olympiad of Science conducted by SilverZone Foundation. (2016)
- Passed **Stage-1** of Dr. Homi Bhabha Balvaidnyanik Competition. (2014 - 2015)

Technical Projects

Big Data Analysis

(2018)

Guide: Prof. Prabhu Ramachandran, Aero Dept.

- Analyzed various parameters corresponding to the **2001 Indian district -wise census**
- Used various **Python libraries** to find out correlation between various parameters
- Learned application of **linear regression** using the Scipy.stats library of Python

Needle Bar Slot Project

(2019)

Guide: Prof. Amit Pandit, Mechanical Engineering Department

- Studied the sub-parts and moving mechanism of a **modified scotch yoke**
- Designed and assembled all the parts to make the schematic using **SolidWorks**

RC Plane Project

(2019)

Guide: Prof. Prajwal Supe, Aero Dept.

- Successfully designed and flew a **working prototype** of a remote controlled plane
- Optimized wing load and aerodynamic lift to **maximize the stability** of the airplane during its flight

Mitigation of thermo-acoustic instabilities in a combustor

(2019 - Present)

Guide: Prof. Prajwal Supe, Aero Dept.

- Studied about the interactions of oscillating **heat release rate** and **pressure fluctuations** which cause **unstable flame fluctuations** leading to degradation of combustion chamber
- Learned about instability mitigation techniques including both **passive and active control** focusing on **actuated swirler operation** in between range of flame blow-off and flame flashback
- Developed, fabricated and implemented an **automated control algorithm** which gives out a **self-designed ramped signal** through **DAQ** system for actuation of the swirler
- Programmed the algorithm in **LabVIEW** software, computed corresponding cycle **Fourier transform** for first mode amplitude to detect an instability for responding in a shorter time

Technical Skills

Programming: C++, Python, Java, C#, Ruby

Web-Development and Databases: HTML, Javascript, CSS, Django, SQLite

Software Packages: AutoCAD, SolidWorks, Unreal Engine, FL Studio, Adobe Illustrator, Adobe Photoshop

Position of Responsibility

Institute Convener-Technical Club

(2020)

- Part of the 7 member **Institute Technical Council** tasked with planning and execution of events catering to **10,000+** students and faculties
- Maintained and updated 7 blogs, garnering over **60,000** hits
- Responsible for organizing and conducting **100+** events spread out over the whole year

Coordinator-Media and Publicity, Mood Indigo

(2018 - 2019)

Part of a four-tiered team responsible for the publicity of Mood Indigo

- Leading a team of **10 volunteers** responsible for media relations during the fest
- In charge of publicity campaign for the multi city competition in Pune, with a footfall of **400+**
- Negotiating deals with over **10** media houses regarding publicity

Coordinator-Competitions and LYP, Mood Indigo

(2018 - 2019)

Part of the team responsible for all competitions held in Mood Indigo

- Revamped the **rules and regulations** of **50+** competitions in various genres
- Negotiated with various organizations to grant the winners a platform to showcase their talent
- Conceptualized and organized **7 Multicity Competitions** pan India thus increasing outreach

Maintenance Secretary-Hostel 15

(2018 - 2019)

Elected representative responsible for handling the grievances of 1000+ residents

- Responsible for regular update of the first aid equipment of the hostel
- Participated in the **ideation and execution** of the second edition of **Solaris**, the cultural festival of Hostel 15, with a budget of **70k+**

Extra-Curricular Activities

- Achieved the **second runners-up position** in the English Wordgames event at the **Inter-IIT Culturals Meet, Gandhinagar** (2018)
- Mentoring **2 teams of 4 freshmen** each to develop RC Planes to compete in the **Institute wide RC Plane competition** (2019)
- Worked as a **panelist** for the **Freshmen Newsletter** published by **Insight**, the student media body of IIT Bombay (2018)
- Lead to **3000%** rise in the subscription of **Online Learning Initiative** by IIT Bombay (2019)
- Contributed to the learning of visually impaired people under the Voice For Purpose initiative of IIT Bombay via recording audio books in English (2019)
- Represented hostel in inter-hostel Table Tennis General Championship (2019)
- Awarded **Black Belt-I Dan** in World Shotokan Karate, given to 10 out of **200+** candidates (2016)
- Participated in MUN as a part of the debate contribution of Rita Memorial High School (2015)
- Successfully completed a year long **Chess Course** under **National Sports Organisation**. (2018)
- Worked as an **organizer** in Techfest, IIT Bombay (2018)
- Competed once in **Inter-hostel Crossy GC** for a distance of 5 kilometres (2019)
- Represented hostel in inter-hostel Table Tennis General Championship (2019)
- Awarded **45+** subject-wise academic excellence awards during High school (2015)
- Winner of **State Level Quiz Competition** amongst students from 15 schools during High School (2016)
- Built a **Line Follower Bot** implementing PID algorithm 3 out of 4 checkpoints under Robotics Club, IITB (2019)