Scholastic Achievements

- Pursuing a **Minor** in **Computer Science** from with a minor CPI of 10.00 *(2017)*
- Awarded **AP** grade for excellent performance in **Electronic Devices Lab** (rank 1 out of 139 students) *(2017)*
- Secured **All India Rank 474** in **IIT JEE-Advanced Examination** among 150,000 candidates *(2016)*
- Bagged **All India Rank 458** in **JEE Mains** among 1.3 million candidates *(2016)*

Internships and Key Projects

Parametric Time Dependent Entropy of EEG *(Summer 2018)*
Prof. Anastasios Bezerianos | Cognitive Engineering, SINAPSE National University of Singapore

- Developed algorithms in python to calculate four **Parametric Time Dependent Entropies** of EEG Signals
- Designed an algorithm using Time-Dependent Entropy to perform **real-time mental fatigue monitoring**
- Applied **Support Vector Machine**(SVM) to classify **Cognitive Fatigue** and **Mental Workload** achieving **75%** and **82%** classification **accuracy** respectively
- Developed a **Graphical User Interface** in Qt framework for projection of the aforementioned results

Mars Rover Project *(October 2017 - Present)*
(The team represented India at the international finals of URC-2018 and bagged 31st position out of 95 teams)
- Responsible for integration of an Battery Management System with **Active Cell Balancing**
- Conceptualised onboard sensor fusing of GPS and IMU via **Kalman Filter** for robust localisation of the rover
- Obtained hands-on experience on implementation of **IK code for robotic arm control**, a **BMS enabled battery** and codes to operate DC motors via **H-bridge motor driver**

Semiconductor Device Parameter Extraction *(November 2017- Present)*
Prof. M. B. Patil | Electrical Engineering Department IIT Bombay
- Conducted a literary survey of variation in values of parameters of the **SPICE model** of a bipolar junction-transistor **BC547** affect its device charecteristics and how they can be tweaked to obtain desirable features
- Developed an iterative method based on **Particle Swarm Optimization** to **determine parameters of the transistor** from device charecteristics accurately and in a **short convergence time**

Touchless Gesture Recognition *(March 2018 - May 2018)*
Prof. Siddharth Tallur | Course Project IIT Bombay
- Bestowed with **Best Project Award** among 70+ projects
- Designed and implemented a Touch-less gesture Audio **volume controller**, **Motion tracker** (using an LED matrix) and a Gesture **pattern lock** using **Infrared Emitters and Sensors**
- Used **Altera Quartus** to code in **VHDL** and **Krypton CPLD** board to implement digital logic.

Technical Skills

Programming	C++, C, Python, Java, Arduino, VHDL
Software packages	MATLAB, Gnuplot, Git, AutoCAD, SolidWorks, Ngspice, LaTeX

Positions of Responsibility

Hostel Web and Computer Secretary *(August 2017 - May 2018)*
Hostel 5 IIT Bombay
- Administered and updated the Hostel Website with respect to hostel events, activities, festivals and mess
- Responsible for maintaining and updating hostel computer systems and networks

Extracurriculars

- Volunteered for the Green Campus initiative of National Service Scheme(NSS),IIT Bombay *(2016)*
- Bagged 2nd place at Vigyasa, an Inter-College general knowledge quiz *(2015)*
- Awarded Silver Medal in IKEN Scientifica Robotics Olympiad *(2010)*
- Maharashtra State Champion in Abacus Mental Arithmetic Exam oraganised by UCMAS *(2008)*