

SCHOLASTIC ACHIEVEMENT

- Secured of **98.85** percentile in JEE Advanced 2017 among the 1.6 Lakh students.
- Amongst Top **1.3%** student in JEE Mains 2017 from the 13 Lakh which applied.
- Recipient of district level scholarship in **MTSE**, in which secured a district **Rank 1**, in 2011
- Awarded of Maharashtra State government scholarship for High school students , by securing **100 percentile** rank, on state level

TECHNICAL PROJECTS

- **AUV(Autonomous Underwater Vehicle)**

SOFTWARE SUBDIVISION

Sept-2018-Present

- Currently involved with the team in the development of Matsya, an Autonomous Underwater Vehicle, capable of doing various underwater tasks. The team represents **IIT Bombay at Robosub, San Diego annually**
- **Developed** a Web-Based Testing Interface, which involved integrating Django and ROS, and also some HTML, CSS and JavaScript in front end
- Implementation of auto frequency detection program for acoustic pinger detection in 3D, by analysing the incoming time domain data from **NI-DAQ** in fourier space and applying different filters
- Implemented a **sensor-fusion** algorithm using **Kalman filter** technique for localisation of vehicle
- **Amongst the semi-finalist in RoboSub 2018**

- **Heart rate monitor**

Course project - by prof Siddharth Tallur

Autumn-2018

- Measured heart rate based on the PPG (photoplethysmogram) effect
- Used an Infrared LED, phototransistor pair followed by a bandpass filter and an inverting amplifier to measure heart rate

- **Institute Summer Technical Project**

Electronics & Robotics club

Summer-2018

- Constructed augmented reality (AR) heads up display (similar to google lense), enabled with face recognition, remote control, etc
- Used a Raspberry-pi for running face recognition and display programs made using python and OpenCV , Dlib, pygames, Django
- Used Django to create a web-interface which can remotely control the glasses
- Integrated Django , Dlib, and pygames using InterProcess communication

- **Maze-solver**

Electronics & Robotics club

Spring-2018

- Programmed a autonomous bot using Arduino which was capable of a transversing through maze without hitting the walls
- Used ultrasonic sensors mounted on the body of the bot for obstacle detection

- **Line Follower Bot**

Electronics & Robotics club

Spring-2018

- Engineered a bot which was capable of following a path using optical IR sensors on the bottom of the bot to track the path
- Implemented PID controller to move the bot along the path using Arduino

INTERNSHIPS

- **Desai Sethi Centre for Entrepreneurship (AcadPal):-**

- Created a Web-app using Django Rest API and Angular framework.
- Managed the backend server and MySQL database
- Successfully implemented token based authentication

SOFTWARE AND SKILLS

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- **Programming languages:** C++, Python, Java, Bash, Gnuplot, Ruby, Assembly
 - **Web Development:-** HTML, CSS, JavaScript, Jinja
 - **Software Frameworks:** ROS, Pygames, OpenCV, D-Lib, Djamgo, Django-Socket, Jekyll, Bootstrap, Numpy, Tkinter , TensorFlow, Node.js , Angular, Rest API
 - **Other Softwares :** Android Studio, Git, AutoCAD (2D), SolidWorks
 - **Electrical :** Arduino, Raspberry Pi, Tinker-Board, AVR

POSITIONS OF RESPONSIBILITY

- **Convenor at Electronics and Robotics Club 2018-19:-**

- Managed different events conducted by the club in the whole year
- Conducted different sessions , and was a key speaker for some events like the “Ubuntu introduction, & Installation”, “Arduino Workshop and hackathon”

- **Volunteer at Web and Coding Club for 2018-19:-**

- Maintainer for the Websites of the different club and for , “www.tech-iitb.org”
- Manage different events hosted by club such as “Git and Github”, “Introduction to competitive programming

EXTRA-CURRICULAR ACTIVITIES

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- Completed one year in **NSO(National Sports Organization) in Swimming, 2017-18**
 - Won a **consolation** prize for two years in National Abacus Competition
 - Participated in various competitions like **XLR8, RC-Plane, Scratch** conducted by the Institute Technical Council
 - Completed a 8 week **Contemporary Dance** camp hosted by Institute Cultural Council.