Shreya Laddha | **180070054**
Electrical Engineering | **UG Second Year**
Indian Institute of Technology Bombay | **Female**
DOB: 16/11/2000

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2020	9.09
Intermediate/+2	CBSE	S.J.Public School	2018	96.40
Matriculation	CBSE	Maheshwari Girls Public School	2016	10.00

Pursuing a **Minor** in **Computer Science and Engineering**

SCHOLASTIC ACHIEVEMENTS

- Secured **All India Rank 607** in **JEE-Advanced** out of 230 thousand candidates *[2018]*
- Secured **All India Rank 608** in **JEE-Main** out of 1.2 million candidates *[2018]*
- Secured **All India Rank 534** in Kishore Vaigyanik Protsahan Yojana(**KVPY-SA**) organised by the Department of Science and Technology, Government of India among 60,000 candidates *[2016]*
- Awarded **KVPY fellowship** in Indian Institute of Science during the **Vijyoshi** camp *[2017]*
- Received a **High Distinction** in Australian National Chemistry Quiz(**ANCQ**) *[2013]*

TECHNICAL PROJECTS

Team Member | Student Satellite Team IIT Bombay

Advitiy: Communication Subsystem *[Feb '19 - Jun '19]*

Advitiy is the next step after Pratham: first student satellite of IIT Bombay

- Developed **Link Budgets** for **Uplink**, **Downlink**, and **Beacon** of the satellite after studying similar link budgets for various past successful satellite missions
- Determined the **Modulation Methods** and **System Baud Rate** to be used for the three communication links in the satellite by analyzing link margins at different **Bit Error Rates**
- Identified concerns related to defining **Noise Temperatures**, threshold **Signal-to-Noise Ratio** for different receivers and various types of **Link Margins** for the distinct modulation methods
- Successfully received **Slow Scan Television** images broadcasted from **International Space Station** and **APT** weather satellite images from **NOAA** satellite using a handheld receiver

PS4-OP Mission: Auxiliary System *[Jul '19 - Present]*

This mission aims to design a space-based experiment to be flown on PSLV Stage 4 Orbital Platform

- Proposed and analyzed **Inflatable Systems** as a technology demonstration payload for the mission
- Scrutinized the **feasibility** of different payload ideas under aspects like accessibility to technology, availability of resources and other system-level constraints provided by **ISRO**
- Identified **system-level requirements** from launch loads and space environment for the auxiliary system to facilitate the demonstration of **Star Tracker** and **Antenna Deployment System**
- Designed a **PCB** using **Eagle CAD** for the peripheral circuit of a single-chip transceiver **CC1125**

AquaGerator | Institute Technical Summer Project *[Jun '19 - Jul '19]*

Institute Technical Council

- Designed an autonomous system that converts water vapour present in the atmosphere into water inside an **airtight**, **watertight** and thermally **insulated** container
- Explored **thermodynamics of water** in order to select appropriate equipment such as the condenser, compressor and expansion valve to implement the mechanical **refrigeration** cooling system
- Conducted experiments and generated **5-7 litres** of water in over **20 hours**
- Presented the concept and prototype of the AquaGerator in **ITC expo** attended by **300+** people

Machine Learning | Summer of Science *[Jun '19 - Jul '19]*

Maths and Physics Club

- Studied and implemented various techniques of regression such as **Multiple**, **Logistic** and **Polynomial regression** for prediction and forecasting of numerical and categorical values
- Successfully designed and tested a regression model to **predict** salaries of employees based on their designation in a company using Python libraries such as **NumPy** and **Scikit-learn**

FM Transmitter *[Mar '19]*

Ham Radio Club

- Designed an FM transmitter circuit by using a **Bipolar Junction Transistor** and tuned the **carrier frequency** using the variable capacitor in the **tank oscillator** part of the circuit
- Successfully tested the circuit by receiving a test signal on a laptop using an **RTL-SDR**

Line Follower *[Spring '19]*

Electronics and Robotics Club

- Designed and tested an **autonomous robot** which follows a white line drawn on a black background
- Made **IR sensor** circuit to give input to **Arduino Uno** for control of DC motors for maneuvering

Digital Smiley Display *[Spring '19]*

Guide: Prof. Mahesh B. Patil (Dept. of Electrical Engineering) *Course project*

- Developed a logic circuit to display a smiley face on **8*8 LED Matrix** using **LM555** timer
- Implemented the circuit using a **Down Ripple Counter** and an **Inverting Decoder**

INTERNSHIPS

Winter Internship | Feature Engineering *[Dec '19]*

Edelweiss Financial Services Ltd

- Worked with a team of **10+ members** in **Credit BG- COOs Office Group**
- Acquired knowledge about credit analysis of loans especially **SME Business Loans**
- Analysed **banking and ftnancial details** provided by the customers and developed **600+ features** to be used by the **loan default prediction model**

POSITIONS OF RESPONSIBILITY

Events Coordinator| Robowars | Techfest *[Aug '19 - present]*

Asia's Largest Technical Fest with a footfall of over 175 thousand people

- Involved in execution of **India's Largest** International Robowars with a budget of over **4 Million** and addressing participants from **10+** International teams and **30+** Indian teams
- Leading a team of **10+** organizers responsible for the planning and execution of **280+** events

Events Organiser| E-Summit 2019 *[Jan '19]*

E-Summit is one of India's largest business event with over 20k attendees and 120+ events

- Actively planned and managed **Panel Discussions** and **Lecture Series** in E-Summit 2019
- Successfully handled venue management and facilitation for an audience of **500+** people at the event

TECHNICAL SKILLS

Programming Languages	Embedded C, C++, Python, Java, MySQL, HTML, Julia
Software Packages	ArduinoIDE, Ngspice, MATLAB, GitHub, Gnuplot, LaTeX, Software-defined Radio (SDR) Console, Saturn PCB Toolkit
Design Softwares	SolidWorks, Eagle, AutoCAD

EXTRACURRICULAR ACTIVITIES

- Participated in **Remote Controlled Plane** making competition organized by Aeromodelling Club, IIT Bombay and learned about flight controls and stability *[2019]*
- Completed **80 hours** of training in **Chess** under the **National Sports Organisation** *[2019]*
- Presented Pratham and Advitiy as a member of **Student Satellite Team** during ITC expo *[2019]*
- Made a **bluetooth controlled** obstacle maneuvering bot with differential mechanism in XLR8 *[2018]*
- **Mentored** a team of 4 members in XLR8 2019 for making a bluetooth controlled bot *[2019]*
- Designed a **Xyloband** to synchronize flashing of LEDs with input from a microphone *[2019]*
- Participated in **Phonathon**, a 10-day telephonic marathon & interacted with **150+** alumni *[2019]*
- Awarded the **Best Chess Player** of the year (2014-15) Award in the school *[2015]*
- Anchored in the **School Annual Function** 2016 in front of an audience of **250+** people *[2016]*

COURSES UNDERTAKEN

Electrical	Electronic Devices & Circuits, Data Analysis and Interpretation, Analog Circuits*, Digital Systems*, Signals & Systems*, Electrical Machines & Power Electronics*
Computer Science	Logic for Computer Science, Data Structures and Algorithms*
Others	ML for Remote Sensing-I* , Complex Analysis, Linear Algebra

[to be completed by May '20]*