- Pursuing minor in **Computer Science and Engineering**

Scholastic achievements

- Secured **All India Rank 34** in JEE (Advanced) '14 out of **150,000** candidates
- Secured **99.99 percentile** in Mains B.Tech '14 out of **1.3 million** candidates
- Secured **All India Rank 46** in Mains B.Arch '14 out of **half a million** candidates
- Shortlisted for the prestigious **KVPY '12** mentorship program at Indian Institute of Science, Bangalore
- Secured **30th position** in South Indian Mathematics Olympiad '10 conducted by **SIMO** Education
- Secured **All India Rank 117** in Unified Cyber Olympiad '10 round-2 conducted by **Unified Council**
- Secured **a percentile score of 98.62** in National Science Olympiad '11 conducted by **SOF**
- Secured **a percentile score of 91.52** in National Cyber Olympiad '11 conducted by **SOF**

Positions of responsibility

Class Representative *(Aug '15 - May '16)*
B.Tech, Department of Electrical engineering, IIT Bombay

- Responsible for conveying the opinions of students effectively to professors and department council members
- Organized extra tutorials and help sessions for tough courses
- Initiated the semester-end photoshoot for the batch of electrical engineering sophomores
- Organized the department traditional day event which had the largest turnout ever

Junior Design Engineer, Electrical Subdivision *(Aug '15 - Jul '16)*
IIT Bombay Racing Team

- Part of a team of 70 members which designs and fabricates an electric race car for **Formula student UK** event
- Responsible for designing and fabricating **Data Acquisition System circuit** and implementing **CAN protocol**
- Assembled an LCD display unit (DASH) to provide real time data to the driver
- Established a wireless communication using **XBEE wireless transmitter(868MHz)** between vehicle and laptop

Coordinator, Team-Web *(Jun '15 - Dec '15)*
Entrepreneurship Cell, IIT Bombay

- Maintained the home page of Entrepreneurship Cell, IIT Bombay
- Responsible for maintaining the **National Entrepreneurship Challenge** Web page
- Created user friendly task portals using HTML, CSS

Organizer, Lectures *(Jan '15)*
Techfest, IIT Bombay

- Assisted in organising other lectures which were given by Late Ex-President of India **Dr.APJ Abdul Kalam**, Nobel Laureate **Dr.Ada Yonath**, Inventor of C++ **Bjarne Stroustrup**
- Responsible for the smooth execution of lectures at Convocation Hall, IIT Bombay

Organizer, Informals *(Dec '14)*
Mood Indigo, IIT Bombay

- Worked with a team of 20 members which organizes the events like informal games, literature games

Projects

Isolated Digit Recognition *(May '16 - Jul '16)*

Guide: Prof. Preeti Rao, Electrical Engineering Department, IIT Bombay

Recognition of spoken digits(Zero to Nine) through Machine Learning

- Imitated human auditory response in closest way possible through using **Mel Frequency Cepstrum**
- Developed an efficient algorithm to separate utterances from the noisy signal in **Scilab**
- Implemented **k-means** clustering algorithm and trained the machine with the cluster centers
- Achieved **85%** accuracy in detection of the digits through matching the feature vectors

Reliability and Performance of Trap based 3D NAND flash memories *(Jul '16 - Present)*

Guide: Prof. Souvik Mahapatra, Electrical Engineering Department, IIT Bombay

Improving **Charge Trap Flash** memories to make them an ideal replacement for Floating Gate Flash memories

- Simulating various parameters like electric fields, potentials of CTF memory cell using C++
- Studying effect of **Silicon Nitride** composition on retention and Program-Erase cycle characteristics
- Identifying of plausible physical mechanisms and other reasons influencing retention charge loss
- Studying the effect of Silicon to Nitride ratio in Silicon Nitride layer on electron and hole trap properties

Mobile-Arduino Flashlight communication *(Nov '15 - Feb '16)*

Guide: Prof. Kumar Appaiah, Electrical Engineering Department, IIT Bombay

Packetised communication between Arduino and mobile achieved through flashlight and a pair of IR LEDs

- Built an **android app** which takes string input and encodes into bit strings for which flashlight blinks
- Decoding of flashlight is done by a pair of **IR LEDs** whose differential voltage is fed to Arduino
- Achieved a maximum transfer rate of **40 bits per second** despite all non-idealities

Key courses undertaken

Electrical Engineering

Microprocessors*, Communication Systems*, Electromagnetic Waves*, Probability and Random Processes*, Analog Circuits, Digital Systems, Signals and System, Electrical Machines and Power Electronics, Electronic Devices and Circuits, Network theory, Advanced Network Analysis

Computer Science and Engineering

Computer Graphics*, Data Structures and Algorithms, Computer Programming and Utilisation , Computer Networks

Other courses

Calculus, Complex Analysis, Linear Algebra, Differential Equations, Quantum Physics and application, Electricity and Magnetism, Psychology*, Economics, Physical Chemistry, Organic and Inorganic Chemistry, Biology

** Courses to be completed by Nov' 16*

Technical skills

Programming	C/C++, VHDL, Python, HTML, CSS
Software	Scilab, MATLAB, OpenCV, OpenGL-SDL, Quartus, AutoCAD, NGSPICE

Extra curriculars

- Participated in wireless **RF module** car building competition XLR8, IIT Bombay *(Aug '14)*
- Represented hostel 8 in **Logic General Championship**, IIT Bombay *(Oct '15)*
- Member of hostel sports contingents who participated in inter-hostel sports, IIT Bombay *(Aug '15 - Feb '16)*
- Completed a 2 month course on **Athletics** from Summer School of Sports, IIT Bombay *(May '15 - Jul '15)*
- Completed a 1 year course on badminton from **National Sports Organization**, IIT Bombay *(Jul '14 - Apr '15)*

Other interests

- Coding and Technical activities
- Guitar, Photography, Sketching, Dance