Pursuing a **minor degree** in **Computer Science**

Academic and Scholastic Achievements

- Awarded **Institute Technical Special Mention** for exemplary contribution to the tech sphere of IIT-B ['18]
- Secured All India Rank **903** in **IIT JEE-Advanced** out of 1.5 million aspirants ['16]
- Recipient of the prestigious Kishore Vigyanik Protsahan Yojana (**KVPY**) Fellowship in basic sciences ['15]
- Attended the **Vijyoshi** Science Camp organised at Indian Institute of Science, Bangalore ['15]
- Awarded National Talent Search Examination Fellowship (**NTSE**) by NCERT, Govt. of India ['14]

Technical and Academic Projects

MAHINDRA RISE DRIVERLESS CAR CHALLENGE |Innovation Cell IIT Bombay [Nov'17-Present]
*Part of a team of 20 members aiming to build **SeDriCa; India's 1st driverless car***

- Formulated a novel method for **Inverse Perspective Mapping** which is being used to get the bird's eye view
- Modified the existing **Linknet(CNN)** architecture for **road and lane detection**
- Implemented **Multinet** for **road** detection & **YOLO(CNN)** for **traffic light,sign** & **Speed-bump detection**
- Developed an **algorithm** for real time **zebra crossing** detection in OpenCV C++
- Currently developing **Convolutional Neural Networks** for **scene parsing** on **tensorflow**

STUDENT DESIGN CHALLENGE |American Society of Mechanical Engineering [Nov'16-Nov'17]
***Overall first in World finals** out of 8 teams from 4 countries held at Tampa, Florida|won 4000$ as prize money*

- Responsible for the electrical and electronics subsystem of the team
- Designed the circuit boards required in **EAGLE** Circuit simulator & modeled the wire routing in Solidworks
- Programmed **Arduino** and **Roboteq** microcontrollers used for the control of all the subsystems
- Felicitated by **honourable Director** Devang Khakhar of IIT Bombay

AUDIO ENCRYPTION AND DECRYPTION |Course Project [Mar'18-Apr'18]
Guide: prof. Siddharth Tallur |Analog Lab

- Designed two **III order Chaotic Oscillators** for encryption and decryption
- The audio signal from a **microphone** is **encrypted** using the **white noise** created by Chaotic Oscillator at transmitter and decrypted at the receiver end using another Chaotic Oscillator and a **Coupler**
- Simulated the entire system in **NGSPICE** and implemented it using **TL072 Op-amps**

REACTION GAME |Course Project ['18]
Guide: prof. Madhav Desai |Digital Circuits Lab

- Developed a game which gives a quantitative measure of the player's **reaction response** to a blink in LED.
- Designed a **Finite State Machine** in **VHDL** and Simulated the **RTL** and **Gate Level** analysis in Quartus
- Implemented the program on a **CPLD** board and interfaced an **LCD** display with the same for viewing output

Technical Skills

Programming Languages/Libraries	C, C++, Python, VHDL, MATLAB, OpenCV
Softwares and Tools	Arduino, SolidWorks, ANSYS, EAGLE, NGSPICE, QUARTUS, ROS
Machine Learning Libraries	Tensorflow, keras, Scikit-Learn

Positions of Responsibility

MANAGER, Innovation Cell - IIT Bombay ['18]
*Innovation Cell aims to facilitate **technical start-ups** and foster an atmosphere of **innovation** and **entrepreneurship***

- Spearheaded a **7-member team** to build 2 bots which are capable of interacting with each other
- Delivered a talk on **Autonomous Cars and drones** at **Millennovation TED talk** by **JPMorgan Chase & Co** to **2000+** audience while representing IIT Bombay ['18]
- Conducted a classroom session on **Introducion to Machine Learning** attended by 100+ students ['18]
- Presented Innovation Cells projects in the **Tech and R&D Expo'17** conducted at IIT Bombay

Extracurriculars

- Successfully completed Summer of Sports in Foot Ball held in summer IIT Bombay [May17-Jun'17]
- Volunteered for Green Campus, National Social Service scheme, IIT Bombay [Aug16-Apr17]
- Stood first in the district of East Godavari, AP in Quiz Competition and second in Map Pointing test ['13]