	Mantri Krishna Sri Ipsit	180070032
	Electrical Engineering	**UG Second Year**
	Indian Institute of Technology Bombay	**Male**
		DOB: 22/06/2000

Examination	University	Institute	Year	CPI / %
Graduation	IIT Bombay	IIT Bombay	2020	9.35
Intermediate/+2	BIE Telangana State	Sri Chaitanya Narayana Jr. College	2018	98.40
Matriculation	BSE Andhra Pradesh	Sri Chaitanya High School	2016	10.00

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

SCHOLASTIC ACHIEVEMENTS

- Secured All India Rank **242** in JEE Advanced among over 0.2 million candidates *(2018)*
- Secured All India Rank **123** in JEE Mains (Engineering) among over 1.3 million candidates *(2018)*
- Secured All India Rank **630** in JEE Mains (Architecture) among over 0.1 million candidates *(2018)*
- Selected to appear for the **Indian National Chemistry Olympiad** (INChO) and **Indian National Astronomy Olympiad** (INAO) conducted by Homi Bhabha Centre For Science Education *(2018)*
- Achieved State Rank **80** in Telangana State EAMCET among over 0.2 million candidates *(2018)*
- Achieved State Rank **132** in Andhra Pradesh State EAMCET among over 0.2 million candidates *(2018)*
- Recipient of the **KVPY Fellowship** by Department of Science and Technology, **Government of India** *(2016)*

KEY PROJECTS

Student Unmanned Aerial Systems Competition | Team Rakshak *(September'19 - Present)*
Guide: Prof. Krishnendu Haldar | Department of Aerospace Engineering | IIT Bombay
- **Team Rakshak** is an IIT Bombay student initiative to develop a fleet of robust **Unmanned Aerial Vehicles** (UAVs) to support **Search and Rescue Operations** (SRO) in the event of disaster
- Working on the task of classifying objects of interest detected by the onboard camera of UAV
- Using the python library **OpenCV** to preprocess the images before feeding it to a neural network
- Implementing deep learning models like **ResNet** and **VGG** in **PyTorch** to achieve the task

App Developer | Mood Indigo| IIT Bombay *(August'19 - Present)*
Asia's Largest College Cultural Fest | Footfall: 143,000 | Events: 230+
- Remodeling the **Mood Indigo App** aiming at 50k+ downloads
- Conceptualizing **new features and applications** such as online registrations, live updates, online food and beverage coupons incorporating the needs of the attendees of the fest
- Working on frontend development of the app in **Android Studio** and backend framework in **Django**

Constellation Detection | Institute Technical Summer Project *(Summer'19)*
Institute Technical Council | IIT Bombay
- Devised a mechanism to detect constellations from an image, irrespective of rotation or scaling
- Processed images using OpenCV library and implemented **Geometric Hashing** for every 4-tuples of stars
- Used **similarity metrics** like L1 and L2 norms, cosine similarity and gaussian similarity to compare hashcodes
- Designed a graphical user interface using **Tkinter** library in python to check for the constellations

Sketching Images using Python | Self Project *(Summer'19)*
Python Art | IIT Bombay
- Developed an algorithm in python to sketch any given image
- Used OpenCV library to detect the edges in an image and **Turtle** library to draw them on a blank canvas

Machine Learning and Convolutional Neural Networks | Summer of Science *(Summer'19)*
Maths n Physics Club | IIT Bombay
- In-depth study of topics like regression, classification, **Support Vector Machines**, K - Means clustering, **Principal Component Analysis** and regularization
- Endeavoured to understand and implement various aspects like **backpropagation**,dropout, different activation functions like **ReLU**,gradient killing, adaptive learning rate algorithms like Momentum, Adagrad and **Adam**
- Explored CNNs like **AlexNet** and VGG16 and tried to implement them on **CIFAR-10** dataset in Tensorflow

Stop Watch | Course Project   *(Spring'19)*
Guide: Prof. M.B.Patil | IIT Bombay
- Designed a stopwatch to display in **mm:ss** format with a resolution of 1s and maximum time of 60 minutes
- Determined the logic using Decade Counters, **555 Timer** IC , AND and OR gates
- Modeled the circuit in **EAGLE** software to test the logic

Bluetooth Modulated Bot | XLR8 Competition   *(Autumn'19)*
Electronics and Robotics Club | IIT Bombay
- Constructed a four-wheeled bot with **Differential** steering via H-Bridge motor driver
- Controlled the bot via **wireless interconnection** between onboard bluetooth module and a mobile app

POSITIONS OF RESPONSIBILITY

Event Organizer at Techfest | IIT Bombay   *(October'18)*
Asia's Largest Science and Technology Festival | Footfall: 175,000
- Helped carry out the event **Speak - Stand to Express**, hosted by the Bollywood Actress **Ms.Yami Gautam**
- Personally contacted **50+** journalists from various agencies to cover the event

Event Organizer at Mood Indigo | IIT Bombay   *(December'18)*
Asia's Largest Cultural Fest | Footfall: 143,000+ | Events: 230+
- Helped carry out the event of India's **first** and only comedian illusionist **Karan Chauhan** during the fest
- Actively handled a large crowd duing various other events along with **15+** fellow organizers

TECHNICAL SKILLS
- **Programming :**   C++, MATLAB, GNU Octave, Python, HTML, CSS
- **Software :**   Git, AutoCAD, SolidWorks, MS Office, LaTeX, Gnuplot, EAGLE, Xcircuit, Ngspice
- **Miscellaneous :**   PyTorch, OpenCV, Django, Arduino , Android Studio, Windows, Ubuntu

RELEVANT COURSES UNDERTAKEN
Electrical Engineering : Electronic Devices and Circuits*, Electronic Devices Lab*, Network Theory*, Data Analysis and Interpretation*, Machines and Digital Electronics
Mathematics : Calculus, Linear Algebra, Ordinary Differential Equations, Partial Differential Equations*, Complex Analysis
Computer Science : Computer Programming and Utilization, Logic in CS*
Physics : Quantum Physics and its Applications, Basics of Electricity and Magnetism
Miscellaneous : Physical, Inorganic and Organic Chemistry, Economics*, Engineering Drawing, Biology

*to be completed by Fall 2019

EXTRACURRICULAR ACTIVITIES

- **Class Representative** of the students from various departments and years of study taking the course **CS228 : Logic in CS**, as a minor. Responsible for scheduling tutorials and quizzes   *(2019)*
- Successfully completed an year-long training in **Lawn Tennis** under **National Sports Organization** *(2018)*
- Contacted **100+** alumni out of a total of **12000+** as a part of Phonathon, a telephonic marathon for contacting alumni under Student Alumni Relations Cell (SARC), IIT Bombay   *(2019)*
- Volunteered in **IIT Bombay Half Marathon** organized by IIT Bombay Sports   *(2018)*
- Participated in the **Web Development** Bootcamp in Technical Summer School, IIT Bombay   *(2019)*
- Volunteered in organizing the **Guinness World Record** event that happened at IIT Bombay where **5700** students gathered to light solar lamps together under the **Solar Urja Lamp** (SoUL) project   *(2018)*
- Attended the **Vijyoshi Science Camp** organized by the **Indian Institute of Science** (IISc)   *(2017)*