

EDUCATION

- **Indian Institute of Technology, Bombay** CPI: 7.87/10
B Tech., Material Science and Metallurgical Engineering 2018 – 2022
- **Indraprastha Institute of Information Technology, Delhi** CPI: 7.9/10
Audited a Year, Computer Science and Engineering 2017 – 2018
- **Modern Vidya Niketan, Faridabad** 91%
Intermediate/+2 2017

EXPERIENCE

- **Mars Rover Team** IIT Bombay
Software Engineer Sept 2018 - Present
 - **Obstacle Detection:** Detected obstacles in the trajectory via clustering of points in laser-scan map generated by Kinect v2, YDLidar sensor. Worked on UTM cost-grid based path update algorithms, involving satellite data parsing for altitude profile and increasing cost of terrain where the obstacle is detected.
 - **Path Planning:** Investigated path planning algorithms like A*, Dijkstras for autonomous operation of rover over the cost maps generated. Also, simulated an algorithm for obstacle avoidance based on cost profiles and gradients.
- **DevCom** IIT Bombay
Developer Mar 2019 - Present
 - **Insti-App:** Part of the team that maintains and develops the app that features the Placement Blog, Upcoming Events and general information on every active body in the Institute. Its Android app has 10,000+ downloads.

PROJECTS

- **Machine Learning(Reading Project)** [\[Report\]](#) IIT Bombay
Summer of Science - Maths n Physics Club May'19 - July'19
 - Completed **Deep Learning Specialization** from Coursera. It is a set of 5 courses aimed to give an introduction to CNNs,RNNs and LSTMs and other implementations of Neural Networks in general.[\[Certificate\]](#)
 - Implemented regression, classification, clustering and data retrieval algorithms along with various neural networks on datasets involving real estate, sentiment analysis, Speech recognition and animal recognition.
 - Attempted famous **Titanic Challenge** on Kaggle, which involved primitive data cleaning and regression.[\[Code\]](#)
 - Attempted the **MNIST Digit Recogniser** challenge on Kaggle which required training a CNN on **MNIST** digits dataset and recognizing hand-written digits. Completed the task with 99% accuracy. [\[Code\]](#)
 - **Text Generator** [\[Code\]](#) IIT Bombay
Seasons of Code - Web and Coding Club May'19 - July'19
 - Implemented a Bi-directional **LSTM** with dropout and trained it on lyrics of over 75 songs by the same artist(Eminem) for more than 10 times while changing the hyperparameters each time.
 - After training the model, used it to generate words in an attempt to learn more about Vanilla RNNs and the effect of different hyperparameters like number of hidden layers, learning rate, etc. on training.
 - **Course Reviews** IIT Bombay
DevCom Sept 2019
 - Used Facebook's **Graph API** to fetch Course Reviews from the facebook group of student support services and stored the data on a Django backend. Used number of likes and comments to sort them on the basis of usefulness.
 - Made the frontend using Angular, with a feature to search efficiently through the large amount of data.
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- **Auto-Login : A Chrome Extension** [\[Code\]](#) IIT Bombay
Oct'18
Hobby Project
 - Developed a Chrome extension using JavaScript to log in with just a single click.
 - It will automatically load internet.iitb.ac.in, fill in a form and submit it for logging on to IITB LAN Network.
- **Online Library Management System** [\[Code\]](#) IIT Bombay
June 2019
DevCom
 - Created a REST API using **Django** rest framework for library management system.
 - It has a feature to keep a track of all Users, Books(including Multiple copies) and their current status.
- **LED Pattern Display** IIT Bombay
Sept 2019
Course Project - M.B. Patil
 - Conceptualized and built a circuit to display any given pattern on an 8 x 8 led matrix.
 - Utilized LM555 IC to construct timer giving input to counter circuit designed using J-K flip-flops.

TECHNICAL SKILLS

- **Programming:** Python, Javascript, C++, Java, ROS, R, Matlab, Bash, HTML5, CSS
- **Softwares/Tools:** Tensorflow, Keras, Git, Matplotlib, L^AT_EX, AutoCAD, Arduino
- **Development:** Django, Solidity, Angular, Jekyll

SCHOLASTIC ACHIEVEMENTS

- **JEE:** Secured **99.8** percentile in JEE(Main) and AIR **3154** in JEE(Advanced).
- **NTSE:** Awarded the National Talent Search Examination scholarship by NCERT, Government of India
- **KVPY:** Recipient of the prestigious Kishore Vaigyanik Protsahan Yojana (KVPY) fellowship

POSITIONS OF RESPONSIBILITY

- **Convener** IIT Bombay
Apr '19 - Mar '20
Web and Coding Club
 - Part of a team of 22 members running one of the biggest technical clubs in India.
 - Contributed towards developing and maintaining the wiki of WnCC. Added the code for testing an Ethereum **Smart Contract** along with an explanation. [\[Link\]](#)
 - Responsible for propagation of **Blockchain@IITB** Circle. Organized a talk on basics of blockchain and a hackathon on Decentralised App development using Smart Contracts.
- **Web Secretary** IIT Bombay
Aug '19 - Apr '20
Hostel 2
 Responsible for development and maintenance of the official [website](#) of Hostel 2, IIT Bombay.
- **Education Volunteer** IIT Bombay
Aug '18 - Apr '19
National Service Scheme
 Completed 80 hours of Social Service, taught basics of computing to under privileged children.

RELEVANT COURSES

- **Computer Science:** Computer Programming & Utilization, Algorithms & Complexity*
- **Mathematics:** Calculus, Linear Algebra, Differential Equations
- **Others:** Quantum Physics, Data Analysis & Interpretation*, Economics*

*Tentative Course for Autumn'19