

Education

Year	Degree/Certificate	Institute	CPI/%
2018 - Present	Bachelor of Technology, Electrical Engineering	Indian Institute of Technology, Kanpur	9.6/10.0
2018	AISSCE, CBSE-XII	Apeejay School, Delhi	96.6%
2016	AISSE, CBSE-X	Apeejay School, Delhi	10.0/10.0

Experience

**Analytics & Automation Internship**

ANHEUSER-BUSCH INBEV

May 2021 - July 2021

- Business solution design for automation & improved efficiency with integrated GUI automation & multi-process deployments over the network.
- Worked on RPA enhancements in vendor payment plan with the Europe business team to reduce B2B manual intervention & automate SAP operations.

**Syft Student Python Developer**

OPENMINED

Feb 2021 -

- Working on PySyft & PyGrid python libraries for privacy enabled machine learning using differential privacy, *Google Summer of Code* extended work.
- Deployment of grpc self-connection servers. Gradient compression, tensor compression, and bytes compression integration with the core-codebase.

**Research & Development Internship**

SAMSUNG R&D INSTITUTE

May 2020 – July 2020

- Development of discrete-event blockchain simulator, with attacks and miner-strategies; modularity to enable extensibility for protocols.
- Security and performance analysis of varying consensus protocols for Avalanche and Conflux blockchains.

**Data-based Analytics Internship**

HPF

May 2019 – July 2019

- Worked to extract emotional responses to structural story-telling incorporating TESS dataset alongside musical emotion classifiers.
- Analysed and inferred computational behavioural patterns and creative regional preferences using HMM segmented and audio-visual cues segmented creative-content engagement data.

Key Projects

**IEEE ICRA DJI RoboMaster AI Challenge**

PROF. LAXMIDHAR BEHERA, DEPT. OF ELECTRICAL ENGINEERING

- Working on game-theoretical analysis by using policy-gradient based RL simulations with actor-critic procedure for combat strategy development.
- Arena spatial analysis with enemy pose & orientation estimation in real-time using overhead monocular cameras.
- Circularly symmetric arena mission-planning with LiDAR SLAM, a factor-graph localization stack, and orientation detection, demonstrating results on ROS-backend Gazebo simulations, as well as in the real world.

**Weighted Progressive Second Price Auction for Resource Allocation**

PROF. SWAPRAVA NATH, DEPT. OF COMPUTER SCIENCE & ENGG., TERM PAPER

- Proposed a modified progressive second price (PSP) auction with weighted bids for improved dynamic allocation of an infinitely-divisible resource.
- Simulated and demonstrated the superiority of the proposed strategy with the downlink Cell Free Massive-MIMO system (beyond-5G networks) for dynamic spectrum allocation and usage-based pricing.

**Indoor Localization Using Sensor Fusion**

AUTONOMOUS INDOOR DRONE, FLIPKART GRID 2020

- Development of indoor drone: designed an indoor UAV for automated warehouse management in GPS denied scenario, developed sensor fusion software pipeline, generated Gazebo simulation of localization and flight control.

**Indian Driving Dataset Lite Challenge**

NCVPRIPG 2019

- Being among the top submissions, awarded a travel grant to attend the NCVPRIPG-2019 conference.

**Concurrent Case of Overpopulation and Water Crisis**

[NITI AAYOG] LEXQUEST FOUNDATION: WORKING DOCUMENT

Positions-of-Responsibility

**Manager, Web and Technology:** POLICY CONCLAVE

2019-20

- Lead the team responsible for entire technology incorporation, web-development and web-event planning.

**Senior Member:** TEAM ERA

2020-21

- Participants in international robotics competitions, currently working on autonomous combat bots.

**Co-ordinator:** BICYCLING SOCIETY

2019-20

- Co-responsible for all the finances, activities and events organized by the bicycling society.

**Student Guide:** COUNSELLING SERVICE

2019-

- Mentoring six junior students through, but not limited to the course of their life on campus.

Scholastic Achievements

2018-2020	<b>Academic Excellence Award,</b> <b>All India Rank 1346 among 0.15 million students,</b> <b>All India Rank 1786 among 1.5 million students,</b> <b>KVPY Fellowship (National Science Fellowship Program), Dept. of Science &amp; Technology,</b> <b>Rank 1 in International Benchmark Tests (Mathematics), ACER,</b>	IIT Kanpur
2018		JEE Advanced
2018		JEE Mains
2017		Govt. of India
2014-2016		ACER (IBT)