Ayush **Sawarni**

(+91) 77-3720-8771 | sawarniayush@gmail.com | sawarniayush | ayush-sawarni

Education

Indian Institute of Science, Bangalore

M.Tech. (Research) in Computer Science — *2021 - 2023*

- CGPA: **9.5**/10
- **Courses**: Computational Methods of Optimization, Stochastic Models and Applications, Foundations of Data Science, Reinforcement Learning, Algorithms under Uncertainty

Birla Institute of Technology and Science, Pilani

B.E. (hons.) in Electrical and Electronics — *2014 - 2018*

- CGPA: **8.4**/10
- **Courses**: Neural Networks and Fuzzy Logic, Machine Learning, Discrete Structures for Computer Science, Object-oriented programming, Operating Systems, Signals and Systems, Communication Systems, Control Systems, Computer Programming

Experience

Indian Institute of Science — *Bangalore, India*

Research Student — *August 2021 - Current*

- Broadly working on problems related to Online Learning, Optimization, and Causal Inference.
- Teaching assistant for the graduate course on Design and Analysis of Algorithms.

Goldman Sachs — *Bangalore, India*

Big Data Engineer — *June 2018 - June 2021*

- Built Data Pipelines and Analytics as a part of the Surveillance Engineering team to detect trade anomalies and fraudulent activities.
- Tech Stack - Spark, HDFS, Hive, Presto, Scala, Python

Indian Institute of Science — *Bangalore, India*

Research Intern — *Jan. 2018 - June 2018*

- Worked at Robert Bosch Center for Cyber-Physical Systems on a Computer Vision project to build a real-time traffic monitoring system for videos with very high occlusion.
- Worked on the problem of Multiple Object Tracking using Kalman Filter and deep image features. (Sample Result)

Samsung Research Institute — *Noida, India*

Summer Intern — *May. 2017 - Jul. 2017*

- Designed and implemented a model for extracting featured images from a video using various image processing and machine learning techniques.

Publications and Technical Presentations

- Ayush Sawarni, Soumyabrata Pal, Siddharth Barman "**Nash Regret Bounds for Linear Bandits**"(Under Submission)

- Ayush Sawarni, Rahul Madhavan, Gaurav Sinha, Siddharth Barman "**Learning Good Interventions in Causal Graphs via Covering**", UAI 2023. (**Paper**)

- Siddharth Barman, Arindam Khan, Arnab Maiti, Ayush Sawarni (Alphabetical Order) "**Fairness and Welfare Quantification for Regret in Multi-Armed Bandits**," AAAI 2023. (**Paper**)

- Raghu Krishnapuram, Ayush Sawarni, Nishal Pereira, Jishnu Jayakumar, Praneet Singh, Prajwal Rao, Abhay Sharma, Soma Biswas, "**Video analytics for traffic modelling**", CyPhySS 2018, IISc Bangalore. (**Poster**)

Achievements

2022 — **Reliance Foundation Scholar**, Selected as one of the 40 postgraduate students in India to receive the Reliance Foundation Scholarship.

2021 — **Graduate Aptitude Test in Engineering (GATE)**, Secured **All India Rank 3** with a score of 1000/1000.

2018 — **India EU ICT Hackathon Winner**, Implemented a smart city solution to optimize the power consumption of streetlights on Indian roads depending on traffic flow and density. *IISc, Bangalore*

2017	**1st**, **Machine Learning Hackathon** organized by MapMyIndia on Kaggle in the Annual Tech Fest. Built a machine learning model for identification of speed signs in street images.	*BITS Pilani, India*
2016	**2nd**, **E-Yantra**, a national robotics competition organized by **MHRD, Govt. of India and IIT-Bombay** . Represented BITS Pilani and secured 2nd position out of 57 teams from all over India in the finals.	*IIT Bombay, India*
2009	**Woodside Scitech Science Award**, for excellence in science.	*Perth, Australia*

Extracurricular Activities

- **Teaching Volunteer** for National Service Scheme,BITS Pilani chapter from Aug 2014 - Jul 2015. Taught computer applications to underprivileged women and kids in Pilani and nearby villages.
- Secretary, Embryo Club (2016 - 2017). Supervised online and on-campus talks by speakers like Sir Anthony J Leggett (Nobel Laureate in Physics) and Dr. Jayant Narlikar (Padma Vibhushan).
- Music - An active member of Rhythmica, the official music club at IISc.