Ayush Sawarni

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Personal webpage

Education

2021–2023 **Indian Institute of Science, Bangalore**,
M.Tech(Research) Computer Science
GPA: **9.5**/10.
Courses: Computational Methods of Optimization, Stochastic Models and Applications, Foundations of Data Science, Reinforcement Learning, Algorithms under Uncertainty

2014–2018 **Birla Institute of Technology and Science, Pilani**,
B.E.(Hons.) Electrical and Electronics
GPA: **8.4**/10.

Experience

2023-Present **Microsoft Research, Bangalore**.
Research Fellow
Developed computationally and statistically efficient algorithms for online learning with non-linear reward functions, with a special focus on parallelizable, batch algorithms.

2021–2023 **Indian Institute of Science, Bangalore**.
Research Student
Thesis - Bandit Algorithms: Fairness, Welfare and Applications in Causal Inference.
Teaching assistant for the graduate course on Design and Analysis of Algorithms.

2018–2021 **Goldman Sachs**.
Strat Analyst
Built surveillance models and analytics to detect trade anomalies and fraudulent activities.

Summer 2017 **Samsung R&D Institute, Noida**.
Summer Intern
Video analytics for Samsung Galaxy smartphones.

Publications

1 Ayush Sawarni, Soumyabrata Pal, Siddharth Barman. "**Nash regret guarantees for linear bandits**". To appear in 37th Conference on Neural Information Processing Systems
Paper , NeurIPS 2023

2 Ayush Sawarni, Rahul Madhavan, Gaurav Sinha, Siddharth Barman "**Learning good interventions in causal graphs via covering**". Proceedings of the Thirty-Ninth Conference on Uncertainty in Artificial Intelligence.
Paper , UAI 2023

3 Siddharth Barman, Arindam Khan, Arnab Maiti, Ayush Sawarni (Alphabetical Order). "**Fairness and welfare quantification for regret in multi-armed bandits**". Proceedings of the AAAI Conference on Artificial Intelligence.
Paper , AAAI 2023 (**Oral Presentation**, Talk)

Working Papers

- "Efficient algorithms for contextual logistic bandits with limited adaptivity" with Gaurav Sinha, Siddharth Barman

Honors and Awards

2023 Received Google Travel Grant for attending NeuRIPS.

2023 Received Microsoft Travel Grant for attending UAI.

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

2021 Secured **All India Rank 3** out of 100,000 candidates in the Graduate Aptitude Test in Engineering (GATE) in Computer Science with a perfect score of 1000/1000. The exam evaluates mathematical aptitude and knowledge in undergraduate computer science courses.

2018 Winner at the India-EU ICT Standards OneM2M Hackathon.

2016 Secured the Runner-up position in a prestigious nationwide robotics competition organized by the Ministry of Human Resource Development (MHRD), India.

Skills

Python, C, C++, Java, Scala *Programming Languages*

Linux, Git *Tools and Systems*

Academic Service and Extracurricular Activities

- **Reviewer** for SOSA 2023.
- **Teaching assistant** for the graduate course on Design and Analysis of Algorithms.
- **Teaching volunteer** for National Service Scheme from 2014–2016. Taught computer applications to underprivileged women and kids in Pilani and nearby villages.
- Music - Active member of the music club at IISc.