

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
Linux, Git

Programming Languages
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.