

# 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  
**Advisor:** Dr. Gaurav Sinha  
Developing 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  
**Advisor:** Prof. Siddharth Barman  
**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 Google Travel Grant for attending NeuRIPS.
- 2023 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 **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 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.