

Nirjhar Das

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Education

2024– Present **Indian Institute of Science, Bangalore**
M.TECH (RESEARCH) COMPUTER SCIENCE

2019–2023 **Indian Institute of Technology Delhi**
B.TECH ELECTRICAL ENGINEERING
GPA: **9.381/10** (Department Rank 5)
Specialization in Cognitive and Intelligent Systems (**AI Focus Area**)
Courses: Reinforcement Learning and Stochastic Control; Online Learning, Bandits and Optimization; Convex Optimization; Concentration Inequalities; Machine Learning; Probability and Stochastic Processes; Math for ML

Experience

Aug 2024– Present **Indian Institute of Science, Bangalore**
RESEARCH STUDENT
Advisor - Prof. Siddharth Barman
Working on problems at the intersection of Learning Theory, Game Theory and Computational Social Choice.

Aug 2023– June 2024 **Microsoft Research, Bangalore**
RESEARCH INTERN
Manager - Dr. Gaurav Sinha
Worked on new bandit models better suited to industrial application in advertising and developed algorithms with theoretical guarantees and empirical performance.

2019–2023 **Indian Institute of Technology Delhi**
UNDERGRADUATE
Advisor - Prof. Arpan Chattopadhyay
BTech Thesis [Part 1](#) - Inverse Reinforcement Learning with Constraint Recovery and [Part 2](#) - Linear Rotting Bandits [won **Best BTech Thesis Award**]
Teaching assistant for the graduate course on Reinforcement Learning and Stochastic Control.

Summer 2022 **Mastercard AI Garage, Gurgaon**
ARTIFICIAL INTELLIGENCE INTERN
Built a semi-supervised deep learning pipeline for fraud detection in credit card transaction.

Publications

- 1 [Nirjhar Das, Gaurav Sinha](#). “**Linear Contextual Bandits with Hybrid Payoff: Revisited**”. *Accepted* in European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases 2024
[Paper](#) , [ECML PKDD 2024](#)
- 2 [Nirjhar Das, Souradip Chakraborty, Aldo Pacchiano, Sayak Ray Chowdhury](#). “**Provably Sample Efficient RLHF via Active Preference Optimization**”. *Accepted* in ICML 2024 Workshop on Theoretical Foundations of Foundation Models
[Paper](#) , [ICML 2024 Workshop](#)

- 3 Ayush Sawarni, [Nirjhar Das](#), Siddharth Barman, Gaurav Sinha. “**Optimal Regret with Limited Adaptivity for Generalized Linear Contextual Bandits**”. *Under Review* in The Thirty-eighth Annual Conference on Neural Information Processing Systems [Paper](#) [↗](#) , [NeurIPS 2024](#) (Under Review)
- 4 [Nirjhar Das](#) and Arpan Chattopadhyay. “**Inverse Reinforcement Learning With Constraint Recovery**”. **Best Paper Award** in 10th International Conference on Pattern Recognition and Machine Intelligence [Paper](#) [↗](#) , [PReMI 2023](#)
- 5 Mustafa Chasmai, [Nirjhar Das](#), Aman Bhardwaj, Rahul Garg. “**A View Independent Classification Framework for Yoga Postures**”. Springer Nature Computer Science, Vol 3. [Paper](#) [↗](#) , [SNCS Sept 2022](#)
- 6 Smriti Chawla, Anja Rockstroh, Melanie Lehman, Ellca Ratther, Atishay Jain, Anuneet Anand, Apoorva Gupta, Namrata Bhattacharya, Sarita Poonia, Priyadarshini Rai, [Nirjhar Das](#), Angshul Majumdar, Jayadeva, Gaurav Ahuja, Brett G. Hollier, Colleen C. Nelson and Debarka Sengupta. “**Gene expression based inference of cancer drug sensitivity**”. Nature Communications, 13. [Paper](#) [↗](#) , [Nat. Comm. Sept 2022](#)

Honors and Awards

- 2023 **Best BTech Project Award:** Won the award among 160+ students in the EE department for research carried out in BTech Project.
- 2023 **Amazon ML Challenge 2023:** Achieved 6th rank out of 5000+ teams by building a deep-learning model for the prediction of package length from item description.
- 2019–2023 **Top 7% Merit Award:** Achieved in 4 semesters out of 8 semesters.
- 2019 **ISC (Indian School Certificate):** Achieved 2nd rank all over India out of 100000 students in Class XII Board Exam with 499/500 marks
- 2019 **Swami Vivekananda Scholarship:** Awarded by *Hon’ble Chief Minister* of West Bengal for excellent performance in Class XII Board Exam.

Skills

Python, C, C++, Java	<i>Programming Languages</i>
Linux, Git, L ^A T _E X	<i>Tools and Systems</i>
Portable Batch System (PBS)	<i>High Performance Computing</i>
Tensorflow, Keras, Pytorch	<i>Deep Learning</i>
NumPy, SciPy, Matplotlib, Scikit Learn, Pandas, Cvxpy	<i>Data Science Libraries</i>

Academic Service and Extracurricular Activities

- **Reviewer** for the IEEE Internet of Things Journal.
- **Teaching Assistant** for the graduate course *Reinforcement Learning and Stochastic Control*.
- **Academic Mentor** for the course Engineering Mechanics. Helped first year students in understanding the course materials and in problem solving.
- **Student Journalist** for the Board for Student Publication reporting on latest developments on the campus that affected the community.
- **Teaching Volunteer** for National Service Scheme from 2019–2022. Taught mathematics and science to underprivileged children from slums of Delhi.