Nirjhar Das

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Personal Webpage

Education

2024–Present **Indian Institute of Science, Bangalore**
M.Tech (Research) Computer Science
GPA: **9.5**/10

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, Gugaon**
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 Ayush Sawarni, Nirjhar Das, Siddharth Barman, Gaurav Sinha. "**Optimal Regret with Limited Adaptivity for Generalized Linear Contextual Bandits**". *Accepted* as Spotlight in The Thirty-eighth Annual Conference on Neural Information Processing Systems
Paper , NeurIPS 2024 Spotlight

3 Nirjhar Das, Souradip Chakraborty, Aldo Pacchiano, Sayak Ray Chowdhury. "**Active Preference Optimization for Sample Efficient RLHF**". *Accepted* in ICML 2024 Workshop on Theoretical Foundations of Foundation Models
Paper , ICML 2024 Workshop

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

2024 **Adobe-IISc Research Workshop:** Won the *1st Runner Up* award in Student Research Presentation.

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	*Programming Languages*
Linux, Git, LaTeX	*Tools and Systems*
Portable Batch System (PBS)	*High Performance Computing*
Tensorflow, Keras, Pytorch	*Deep Learning*
NumPy, SciPy, Matplotlib, Scikit Learn, Pandas, Cvxpy	*Data Science Libraries*

Academic Service and Extracurricular Activities

- **Reviewer** for the IEEE Internet of Things Journal.
- **Teaching Assistant** for the graduate course *Reinforcement Learning and Stochastic Control.*
- **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.