

Avinandan Bose

PHD STUDENT · CSE UW

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Education

University of Washington

PHD, COMPUTER SCIENCE AND ENGINEERING

- Advisors: Prof. Maryam Fazel, Prof. Lillian Ratliff

Seattle, WA, USA

Sep. 2022-Present

Indian Institute of Technology Kanpur (IIT K)

B.TECH, COMPUTER SCIENCE AND ENGINEERING

- Advisors : Prof. Piyush Rai, Prof. Ketan Rajawat
- GPA : 9.2/10.0
- **Academic Excellence Award (20-19,20,21)** : Awarded to top 10 percentile students based on annual academic performance
- **CLASS OF 1990 SCHOLARSHIPS (2018)** : Awarded to top three freshmen

Kanpur, India

Jul. 2018 - Dec. 2021

Research Experience

Singapore Managemnet University

PROF. PRADEEP VARAKANTHAM, PROF.ARUNESH SINHA, PROF.MAI AHN TIEN

- Developed techniques for global convergence in formulations with Distributional and Adversarial Robustness.
- Proposed novel Partial Policy Decentralisation techniques on Large Scale Cooperative Multi Agent RL tasks with guarantees on recovering optimal policy.
- Worked on Stackelberg Games for Network Interdiction, Resource Allocation, Adversarial Defence.
- Formulated a hierarchial system of GANs to promote few shot learning.

Singapore

May.2021 - Sep.2022

Indian Institue of Technology Kanpur (IIT K)

PROF.PIYUSH RAI

- Proposed novel non-parametric generative models for images using Second Order Neural ODEs.

India

Dec.2020 - Apr.2021

Indian Statistical Institute (ISI)

PROF. SOUMENDU SUNDAR MUKHERJEE

- Developed a framework to analyse distributional changes in Topic Proportions in Temporal Text Data.

India

May.2020- Nov.2020

Indian Institue of Technology Kanpur (IIT K)

PROF. KETAN RAJAWAT

- Studied techniques of convex optimization to improve convergence rates of matrix factorization.
- Worked on Tensor Factorization for Traffic Forecasting.

India

Aug.2019 - Apr.2020

Publications

PUBLISHED

Avinandan Bose, Pradeep Varakantham "Solving Constrained Centralized MARL for Sustainable On Demand Ride Pooling" In Proceedings of 26th European Conference on Artificial Intelligence (**ECAI**) 2023

Avinandan Bose, Tracey Li, Arunesh Sinha, Mai Ahn Tien "A Fair Incentive Scheme for Community Health Worker" In Proceedings of 37th Association for Advancement in Artificial Intelligence (**AAAI**) Conference, **Oral Presentation**

Avinandan Bose, Mai Ahn Tien, Arunesh Sinha "Scalable Distributional Robustness in a Class of Non Convex Optimization with Guarantees" **NeurIPS** 2022

Chen Changyu, **Avinandan Bose**, Shih-Fen Cheng, Arunesh Sinha "Multiscale Generative Models: Improving Performance of a Generative Model Using Feedback from Other Dependent Generative Models" In Proceedings of 36th Association for Advancement in Artificial Intelligence (**AAAI**) Conference

Avinandan Bose, Aniket Das, Yatin Dandi, Piyush Rai "NeurInt : Learning to Interpolate using Neural ODEs" **Oral Spotlight** at *The Symbiosis of Deep Learning and Differential Equations (DLDE) NeurIPS Workshop*

PREPRINTS

Mai Ahn Tien, **Avinandan Bose**, Thahn Nguyen, Arunesh Sinha "Stackelberg Network Interdiction under Boundedly Rational Adversary" In Review at AAAI 2023

Avinandan Bose, Soumendu Sundar Mukherjee "Change Point Analysis of Topic Proportions in Temporal Text Data" In Review at *Journal of Computational and Graphical Statistics(JCGS)*

Teaching Experience _____

Winter 2023	Convex Optimization and Applications , Graduate Teaching Assistant	UW
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Honors, Awards, & Scholarships _____

2018	All India Rank 104 , Joint Entrance Examination Advanced 200,000 candidates	India
2018	All India Rank 554 , Joint Entrance Examination Main 1.5 million candidates	India
2017	All India Rank 68 , KVPY Scholarship Indian Institute of Science and Government of India	India
2018	All India Rank 1 , West Bengal Joint Entrance Examination	India
2018	Gold Medal , Indian National Physics Olympiad (Top 35 in the nation)	Mumbai, India
2015	Gold Medal , Indian National Junior Science Olympiad (Top 35 in the nation)	Mumbai, India
2017	3rd in State, National Top 1 % , National Standard Examination in Physics	India
2017	3rd in State, National Top 1 % , National Standard Examination in Chemistry	India
2017	2nd in State, National Top 1 % , National Standard Examination in Astronomy	India
2016	3rd in State, National Top 1 % , National Standard Examination in Astronomy	India
2016	State Top 1 % , National Standard Examination in Physics	India
2014	State Top 1 % , National Standard Examination in Junior Science	India
2016	Scholar , National Talent Search Examination	India