Aditya Ghosh – Curriculum Vitae

CONTACT DETAILS

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ADDRESS

Computing and Data Science (CoDa)
389 Jane Stanford Way, Stanford University
Stanford, CA 94305

EDUCATION

Ph.D. in Statistics, Stanford University GPA 4.13 — 2022 – present

- Advised by Stefan Wager (Stanford GSB) & Dominik Rothenhäusler (Stanford Statistics)

Masters of Statistics (M.Stat), Indian Statistical Institute, Kolkata — 2020 – 2022

- **Dissertation advisor:** Prof. Bodhisattva Sen (Columbia University)
- **Specialization:** Theoretical Statistics

Bachelor of Statistics (B.Stat), Indian Statistical Institute, Kolkata — 2017 – 2020

RESEARCH

My research spans causal inference, statistical learning, and optimization. I am currently working on policy evaluation in dynamical systems (with Stefan Wager) and distribution shift (with Dominik Rothenhäusler).

4. **Ghosh, A.** & Rothenhäusler, D. (2025). Assumption-robust Causal Inference. arXiv:2505.08729 ⬀

3. **Ghosh, A.**, Imbens, G. & Wager, S. (2025). PLRD: Partially Linear Regression Discontinuity Inference. arXiv:2503.09907 ⬀

2. **Ghosh, A.**, Deb, N., Karmakar, B., & Sen, B. (2022+). Efficiency and Robustness of Rosenbaum's Rank-based Estimator in Randomized Experiments. *Submitted.* ⬀

1. **Ghosh, A.** (2019). An asymptotic formula for the Chebyshev theta function. *Notes on Number Theory and Discrete Mathematics*, 25(4), 1-7. Journal link ⬀

I currently help organize the Online Causal Inference Seminar.

INVITED TALKS

- **Joint Statistical Meeting**, Nashville, Tennessee — 2025
  Session: Regression Discontinuity Designs with Complex Data

- **Industrial Affiliates Annual Conference**, Stanford University — 2024
  Title: Practical bias-aware inference in regression discontinuity designs: An asymptotic view

- **Stanford Causal Science Center Conference**, Stanford University — 2024
  Title: Asymptotic bias-aware inference in regression discontinuity designs under higher-order smoothness

- **Computational and Methodological Statistics**, HTW Berlin, University of Applied Sciences, Berlin, Germany — 2023
  Title: Efficiency and robustness of Rosenbaum's regression (un)-adjusted rank-based estimator in randomized experiments

- **PCM Memorial Lecture**, Indian Statistical Institute, Kolkata — 2022
  Title: The synthetic control method in causal inference

- **D. Basu Memorial Lecture**, Indian Statistical Institute, Kolkata — 2021
  Title: Large low-rank matrix completion

- **Online Reading Group on Functional Data Analysis** ⬀ — 2021
  Title: Two-sample testing of the equality of mean functions

- **Students' Learning Seminar**, Indian Statistical Institute, Kolkata — 2021
  Title: Matching estimators in causal inference

TEACHING	**As instructor**, Stanford University ExploreCourses ⧉	
	• Stats 302: Qualifying Exam Workshop (Theoretical Statistics).	Summer 2025
	• Stats 302: Qualifying Exam Workshop (Probability).	Summer 2024
	As teaching assistant, Stanford University ExploreCourses ⧉	
	• Stats 60: Introduction to Statistical Methods: Precalculus.	Spring 2025
	• Stats 361: Causal Inference.	Winter 2025
	• Stats 200: Introduction to Theoretical Statistics.	Autumn 2024
	• Stats 310B/Math 230B: Theory of Probability II.	Winter 2024
	• Stats 310A/Math 230A: Theory of Probability I.	Autumn 2023
	• Stats 216: Introduction to Statistical Learning.	Winter 2023
	• Stats 202: Data Mining and Analysis.	Summer 2023, Autumn 2022

Other experiences

- Trained numerous high school students for mathematical olympiads, entrance examinations of Indian Statistical Institute, Chennai Mathematical Institute, and other competitive exams.

- Maintained a blog (ghoshadi.wordpress.com) aimed at helping high-school students prepare for Mathematical Olympiads and similar competitions.

AWARDS	**Recognitions from the Indian Statistical Institute**	
	• **ISIAA – J. K. Ghosh Memorial Gold Medal** (outstanding performance in M.Stat)	2023
	• **ISIAA – Mrs. M. R. Iyer Memorial Gold Medal** (best overall performance in B.Stat)	2021
	• **Nikhilesh Bhattacharyya Memorial Gold Medal** (best performance in Statistics in B.Stat)	2021

Others

- **Madhava Mathematics Competition**, received invitation to a prestigious event   2019, 2018

- **Indian National Mathematical Olympiad**, earned a **certificate of merit** from NBHM, Govt. of India (awarded to the top 75 INMO participants in the country)   2016

OTHER PROJECTS	• **Inference for Adaptively Sampled Data via REINFORCE** with Ivy Zhang	2025
	• **SMARTer Multi-task Fine-tuning of BERT** with Disha Ghandwani and Rahul Kanekar	2024
	• **Analyzing lower back pain data** with Anik Burman and Soham Das	2020
	• **Age-dependent branching processes with/without immigration** with Wribhu Banik and Shouvik Middey	2020
	• **Finding anomalies in a coal quality data of Coal India Limited** with Soham Das and Arjama Das	2020
	• **Typical distance between two randomly selected vertices of a Erdős-Rényi binomial random graph** with Sayak Chatterjee	2020
	• **Method of moments in random matrix theory** (advisor: Prof. Arijit Chakrabarty)	2019
	• **Summer Internship in Cryptology**, supported by Microsoft Research India, at the R. C. Bose Centre for Cryptology and Security, Indian Statistical Institute, Kolkata	2019

LANGUAGES   {**R**, Python}, {LATEX, Markdown, HTML}, {English, Bengali (native), Hindi}