Raaz Dwivedi

Harvard/MIT rzrsk.github.io raaz@seas.harvard.edu raaz@mit.edu

Academic Appointments & Education

FODSI Postdoctoral Fellow, Harvard University & Massachusetts Institute of Technology *2021-*
Advisors: *Prof. Susan Murphy & Prof. Devavrat Shah*

Ph.D., EECS, University of California at Berkeley (GPA 4.0/4.0) *2015-2021*
Advisors: *Prof. Martin Wainwright & Prof. Bin Yu*
Thesis: *Principled statistical approaches for sampling, and inference in high dimensions*

B. Tech., EE, Indian Institute of Technology, Bombay (GPA 9.95/10.0) *2010-2014*
Advisor: *Prof. Vivek Borkar*

Research Interests

Causal inference, sequential decision making, reinforcement learning, and more broadly theoretical, and applied aspects of statistical machine learning

Selected Achievements & Awards

Institute of Mathematical Statistics (IMS) New Researcher Travel Award *2022*
Best Presentation Award, LIDS Student Conference, MIT *2022*
Best Student Paper Award, Sections on Statistical Computing & Graphics ASA *2022*
Postdoctoral Fellowship, Foundations of Data Science Institute (FODSI) *2021*
Outstanding Graduate Student Instructor Award, UC Berkeley *2020*
Berkeley Fellowship, the most prestigious fellowship for incoming Ph.D. students *2015*
President of India Gold Medal, IIT Bombay, for the highest GPA in the institute *2014*
All India Rank 10 (amongst half a million), IIT Joint Entrance Exam (IIT-JEE) *2010*

Work Experience

Microsoft Research, Research Intern, New England, USA *Summer 2019*
Mist Systems (Juniper Networks), Data Science Intern, Cupertino, USA *Summer 2017*
WorldQuant Research, Senior Quantitative Researcher, Mumbai, India *Jul 2014-Jul 2015*
Stanford University, Research intern (with Prof. Balaji Prabhakar), USA *Summer 2013*
Ivy Mobility, Data Science Intern, Chennai, India *Winter 2012*

Selected Publications

1. **D.** *et al.*"Counterfactual inference in sequential experimental design", *arXiv preprint, 2022*
2. **D.** *et al.*"Stable discovery of interpretable subgroups via calibration in causal studies", *International Statistical Review (ISR), 2020*
3. Altieri *et al.*"Curating a COVID-19 data repository and forecasting county-level death counts in the United States", *Harvard Data Science Review (HDSR), 2020*
4. **D.** *et al.*"Singularity, misspecification, & the convergence rate of EM", *Annals of Statistics, 2020*
5. **D.** *et al.*"Log-concave sampling: Metropolis-Hastings algorithms are fast", *Journal of Machine Learning Research (JMLR), 2019.*

Selected Invited Talks

1. Counterfactual inference in sequential experimental design. *IMS Annual Meeting.* *Jun 2022*
2. Near-optimal compression in near-linear time, *MSRI, Berkeley* *Mar 2022*
3. Counterfactual inference in sequential experimental design, *Simons Inst., Berkeley* *Feb 2022*
4. Imputation using nearest neighbors for adaptively collected data, *FODSI Retreat* *Jan 2022*
5. Revisiting MDL complexity in overparameterized models, *Collab. on Deep Learning* *Nov 2021*
6. Singularity, misspecification, & the convergence rate of EM, *AMS Meeting, Riverside* *Nov 2019*

Selected Teaching Experience

- *Sequential Decision Making*: STAT 234, Spring 2022, Harvard University
- *Modern Statistical Prediction, and Machine Learning*: STAT 154, Spring 2019, UC Berkeley
- *Introduction to Machine Learning*: EECS 189, Spring 2018, UC Berkeley

Selected Academic Service

- *Reviewer*: Bernoulli, JMLR, IEEE-IT, COLT, ICML, NeurIPS, AISTATs, SODA, FOCS, AAAI
- *Mentor*: Summer Institute on Micro-Randomized Trial Designs (2021), IDSS (Ph.D.) at MIT (2022), BAIR (Ph.D. and UG) at UC Berkeley (2018-20), ISMP (UG) at IIT Bombay (2013-14)
- *Graduate Admission Committee*: EECS MIT (2021), EECS UC Berkeley (2018-2020)