Ronak Mehta

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Google Scholar

Education

University of Washington — Seattle, WA
Ph.D. in Statistics (*Advisor: Dr. Zaid Harchaoui*) — Fall 2020–Summer 2025

Coursework: Generative Models, Reinforcement Learning, Natural Language Processing, Convex Optimization, Statistical Theory, Measure-Theoretic Probability

Johns Hopkins University — Baltimore, MD
M.S.E. in Applied Mathematics & Statistics (*Advisor: Dr. Joshua Vogelstein*) — Fall 2018–Spring 2019

Thesis: "Independence Testing for Multivariate Time Series"

Coursework: Nonlinear Optimization, Matrix Analysis, Bayesian Statistics

Johns Hopkins University — Baltimore, MD
B.S. in Applied Mathematics & Statistics — Fall 2015–Spring 2018

Coursework: Time Series Analysis, Data Structures, C/C++ Programming, Analysis of Algorithms

Work Experience

D.E. Shaw & Co. — New York, NY
Quantitative Analyst Intern in Futures — Summer 2023

Distributed training of large language models.

Amazon — Menlo Park, CA
Research Scientist Intern in Supply Chain Optimization Technology — Summer 2022

Deep sequence models and graph neural networks for time series forecasting.

Work featured in KDD23 Workshop on Deep Learning on Graphs.

Facebook (now Meta) — Menlo Park, CA
Applied Research Science Intern in Enterprise Products — Summer 2021

Multimodal machine learning, interpretable AI.

Microsoft Research — Redmond, WA
Research Intern in Special Projects — Summer 2020

Representation learning, continual/lifelong learning.

Johns Hopkins University Department of Biomedical Engineering — Baltimore, MD
Assistant Research Engineer in NeuroData Laboratory — Fall 2017–Spring 2020

Nonparametric time series methods, uncertainty estimation, continual/lifelong learning.

Goldman Sachs — New York, NY
Software Engineering Intern in Finance & Risk Technology — Summer 2018

Large-scale data streaming, time series analysis, user-driven software design.

Johns Hopkins University Applied Physics Laboratory — Laurel, MD
Research Intern in Large-Scale Analytics Systems — Summer 2017

Sentiment analysis, network science.

Publications

[1] **R. Mehta** and Z. Harchaoui, "A Generalization Theory for Zero-Shot Prediction", in *ICML*, **Oral (top 1% of submissions)**, 2025.

[2] L. Liu, **R. Mehta**, S. Pal, and Z. Harchaoui, "The Benefits of Balance: From Information Projections to Variance Reduction", in *NeurIPS*, 2024.

[3] **R. Mehta**, J. Diakonikolas, and Z. Harchaoui, "Drago: Primal-Dual Coupled Variance Reduction for Faster Distributionally Robust Optimization", in *NeurIPS*, 2024.

[4] **R. Mehta**, V. Roulet, K. Pillutla, and Z. Harchaoui, "Distributionally Robust Optimization with Bias and Variance Reduced Gradients", in *ICLR*, **Spotlight (top 5% of submissions)**, 2024.

[5] C. Shen, J. Chung, **R. Mehta**, T. Xu, and V. Joshua T, "Independence Testing for Temporal Data", *TMLR*, 2024.

[6] A. Li, R. Perry, C. Huynh, T. M. Tomita, **R. Mehta**, J. Arroyo, J. Patsolic, B. Falk, S. Sarma, and J. Vogelstein, "Manifold Oblique Random Forests: Towards Closing the Gap on Convolutional Deep Networks", *SIAM Journal on Mathematics of Data Science*, 2023.

[7] **R. Mehta**, V. Roulet, K. Pillutla, L. Liu, and Z. Harchaoui, "Stochastic Optimization for Spectral Risk Measures", in *AISTATS*, 2023.

[8] S. Yang, M. Wolff, S. Ramasubramanian, V. Quenneville-Belair, **R. Mehta**, and M. Mahoney, "GEANN: Scalable Graph Augmentations for Multi-Horizon Time Series Forecasting", in *KDD 2023 Workshop on Mining and Learning with Graphs*, 2023.

Teaching

University of Washington

Teaching Assistant - Graduate Courses

Statistical Inference (STAT 513)	Winter 2024
Statistical Inference (STAT 513)	Winter 2023
Machine Learning for Big Data (STAT 548 / CSE 547)	Winter 2022
Statistical Machine Learning for Data Scientists (DATA 558)	Spring 2021
Applied Regression (STAT 504)	Winter 2021

Teaching Assistant - Undergraduate Courses

Introduction to Machine Learning (STAT 416 / CSE 416)	Fall 2021
Statistical Methods in Engineering & Science (STAT 390)	Fall 2020

John Hopkins University

Instructor of Record

Mathematical Thinking and Proof-Writing for Engineers (EN.553.109)	Winter 2020

Teaching Assistant - Graduate Courses

Matrix Analysis & Linear Algebra (EN.553.792)	Fall 2019

Teaching Assistant - Undergraduate Courses

Probability & Statistics for the Biological Sciences & Engineering (EN.553.311)	Spring 2019
Probability & Statistics for the Physical Sciences & Engineering (EN.553.310)	Fall 2018
Computational Molecular Medicine (EN.553.450)	Spring 2018

Talks

The Benefits of Balance: From Information Projections to Variance Reduction

UW IFDS Seminar, April 2025 — Seattle, WA

Experimentally Informed Signal Processing with Supervised Independent Component Analysis

UW CoNECTOME Conference, May 2025 — Seattle, WA

NIH XAI Retreat, February 2025 — Seattle, WA

Primal-Dual Algorithms for Faster Distributionally Robust Optimization

UW IFDS Seminar, April 2024 — Seattle, WA

Distributionally Robust Optimization with Bias and Variance Reduction

NSF TRIPODS Workshop 2024 — San Diego, CA

INFORMS Annual Meeting 2023 — Phoenix, AZ

SIAM PNW Conference 2023 — Bellingham, WA

Stochastic Optimization for Spectral Risk Measures

JSM 2023 — Toronto, ON

SIAM OPT 2023 — Seattle, WA

Stochastic L-Risk Minimization

UW IFDS Seminar, February 2023 — Seattle, WA

JSM 2022 — Washington, D.C.

Scholarships and Awards

Weil Neurohub and NeuroTEC Travel Award 2023

To fund the development of high-impact projects that leverage imaging, engineering, genomics and molecular therapies, and computation and data analytics; To support collaborative research projects with near-term transformational potential, novel research ideas led by pioneering investigators, and the training of the next generation of clinicians and scientists.

JSM Student and Early-Career Travel Award 2023

To encourage students and early-career professionals to become engaged in the statistical community through participation in ASA-sponsored professional meetings. The selection of individuals to support is based on both merit and financial need.

JSM Student Paper Award Honorable Mention in Risk Analysis 2023

For exceptional student papers regarding theoretical development or applications of risk analysis, including environmental risk, financial risk, the risk to engineering structures, health risks, risks to defense and national security. Presented at Joint Statistical Meetings (JSM) 2023.

Institute for Foundations of Data Science (IFDS) Scholarship 2022

To promote fundamental research in the mathematical foundations of data science. Supported by the NSF Transdisciplinary Research in Principles of Data Science (TRIPODS) program.