Ronak Mehta

Email: ronakdm@uw.edu GitHub: github.com/ronakdm

EDUCATION

University of Washington

Seattle, WA

Ph.D. in Statistics

Fall 2020-Current

- Relevant Coursework: Generative Models, Reinforcement Learning

Johns Hopkins University

Baltimore, MD

M.S.E. in Applied Mathematics & Statistics, GPA: 4.0/4.0

Fall 2018–Spring 2019

- Thesis: "Independence Testing for Time Series", Advisor: Dr. Joshua Vogelstein
- Relevant Coursework: Nonlinear Optimization, Statistical Theory, Matrix Analysis & Linear Algebra,
 Applied Bayesian Statistics, Topics in Model Selection, Statistical Pattern Recognition

Johns Hopkins University

Baltimore, MD

B.S. in Applied Mathematics & Statistics, GPA: 3.6/4.0

Fall 2015–Spring 2018

 Relevant Coursework: Real Analysis, Time Series Analysis, Intermediate Programming (C/C++), Data Structures (Java), Analysis of Algorithms

EXPERIENCE

Microsoft Research

Redmond, WA

Research Intern in Special Projects

Summer 2020

- Proposed a comprehensive theoretical formulation of the transfer, multitask, and continual learning problems.
- Adapted and evaluated continual learning methods on a suite of natural language, vision, and time series tasks.

Johns Hopkins University Department of Biomedical Engineering

Baltimore, MD

Assistant Research Engineer in Dr. Joshua Vogelstein Laboratory

Fall 2017-Spring 2020

- Developed decision forest methods for structured data, uncertainty estimation, and continual learning.
- Developed hypothesis test to measure dependence between time series, with applications to fMRI data.

Goldman Sachs

New York, NY

Software Engineering Intern in Finance & Risk Technology

Summer 2018

- Implemented feature to add new metrics into large-scale data streaming platform for financial time series.
- Worked directly with end-users and developed software iteratively in a propriety language.

Johns Hopkins University Applied Physics Laboratory

Laurel, MD

Research Intern in Large-Scale Analytics Systems

Summer 2017

- Conducted sentiment and centrality analysis of Twitter communication network to identify problematic users.
- Implemented distributed clustering algorithm for categorical data using Apache Spark.

Preprints

- [1] J. T. Vogelstein, H. S. Helm, **R. Mehta**, J. Dey, W. LeVine, W. Yang, B. Tower, J. Larson, C. White, and C. E. Priebe, "A general approach to progressive learning", [arXiv link], 2020.
- [2] R. Mehta, J. Chung, C. Shen, T. Xu, and J. T. Vogelstein, "Independence testing for multivariate time series", [arXiv link], 2019.

- [3] R. Mehta, R. Guo, J. Arroyo, M. Powell, H. Helm, C. Shen, and J. T. Vogelstein, "Estimating information-theoretic quantities with uncertainty forests", [arXiv link], 2019.
- [4] S. Panda, S. Palaniappan, J. Xiong, E. W. Bridgeford, R. Mehta, C. Shen, and J. T. Vogelstein, "Hyppo: A comprehensive multivariate hypothesis testing python package", [arXiv link], 2019.
- [5] R. Perry, T. M. Tomita, **R. Mehta**, J. Arroyo, J. Patsolic, B. Falk, and J. T. Vogelstein, "Manifold forests: Closing the gap on neural networks", [arXiv link], 2019.

TEACHING

University of Washington

• Teaching Assistant Fall 2020

Statistical Methods in Engineering & Science (STAT 390)

John Hopkins University

• Instructor Winter 2020

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

• Guest Lecturer Fall 2019

Neurological Data Science Design Team (EN.580.697)

• Teaching Assistant Fall 2019

Matrix Analysis & Linear Algebra (EN.553.792)

• Teaching Assistant Spring 2019

Probability & Statistics for the Biological Sciences & Engineering (EN.553.311)

• Teaching Assistant Fall 2018

Probability & Statistics for the Physical Sciences & Engineering (EN.553.310)

• Teaching Assistant at Johns Hopkins University Spring 2018

Computational Molecular Medicine (EN.553.450)

SKILLS

- Proficient: Python, R, MATLAB, Matplotlib, Seaborn, scikit-learn, joblib
- Familiar: Java, C/C++, Scala, PyTorch, Tensorflow, Keras, Apache Spark

Won "Best Arrangement" award at national competition Sangeet Sangar 2018.

Mentorship

• Claire Gao Fall 2020

Linear Methods in Machine Learning (U. of Washington Dept. of Statistics Directed Reading Program)

Extracurricular Activities

• Music Director at Kranti A Capella Spring 2016–Spring 2018 Wrote arrangements, led practices, and taught music theory as Music Director of South Asian fusion a capella group.

• Finance Education Chair & Alumni Chair at Alpha Kappa Psi Spring 2016–Spring 2018

Organized alumni networking events and curated education program in introductory finance for new members of professional business fraternity.