# MATTHEW ESMAILI MALLORY

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## **EDUCATION**

PhD in Statistics, Harvard University

2022–2027

Awarded National Science Foundation's Graduate Research Fellowship (NSF GRFP)

Advised by Dr. Morgane Austern

MA in Statistics, Harvard University 2022–2025

BS in Pure Mathematics, BS in Statistics, University of California, Los Angeles

2018 - 2022

Honors Collegium, Highest Honors in Mathematics, 4.0 GPA

## **PUBLICATIONS**

Esmaili Mallory, M., Han Huang, K., & Austern, M. (2025). "Universality of High-Dimensional Logistic Regression and a Novel CGMT under Dependence with Applications to Data Augmentation." Proceedings of Thirty Eighth Conference on Learning Theory (pp. 1799–1918). PMLR.

Esmaili Mallory, M., Brown, J. & Glickman, M. (2025). "Come Together: Analyzing Popular Songs Through Statistical Embeddings." In Progress. (*Presented at Joint Statistical Meetings 2025*).

Yu, A., Becquey, C., Halikias, D., **Esmaili Mallory, M.**, & Townsend, A. (2021). "Arbitrary-Depth Universal Approximation Theorems for Operator Neural Networks." arXiv:2109.11354.

## **TEACHING**

Teaching Fellow for Stat 149: Generalized Linear Models, Harvard Jan 2024 - Jun 2024

Teaching Fellow for Stat 104: Quantitative Methods for Economics, Harvard

Aug 2023 - Dec 2023

• Received Harvard Undergraduate Association's Certificate of Special Recognition in teaching.

Teaching Assistant for Math 115A: Linear Algebra, UCLA

Jan 2022 - Mar 2022

Teaching Assistant for Math 115A: Linear Algebra, UCLA

Apr 2021 - Jun 2021

## LEADERSHIP & EXPERIENCE

Statistical Consultant, Harvard

Jan 2024 - present

• Received acknowledgment in publications for assisting Harvard researchers in their statistical analyses.

President, Harvard Iranian Student Association

July 2024 - present

Research Participant, Princeton Machine Learning Theory Summer School

Aug 2025

• Accepted to and presented research at Princeton's summer school for theoretical advances in deep learning.

President, UCLA Undergraduate Mathematics Students Association

Mar 2019 - Jun 2022

Undergraduate Researcher, UCLA Mathematics & Statistics Departments

Jan 2021 - Jun 2021

• Researched topological data analysis, algebraic statistics, category theory, and ergodic theory.

Mathematics Docent, Olga Radko Endowed Math Circles

Jul 2020 - Feb 2022

## RELEVANT COURSEWORK

Mathematics Real & Complex Analysis, Measure Theory, Group Theory, Ring Theory, Galois Theory,

Linear Algebra, Differential Geometry, Topology, Ordinary & Partial Differential Equations,

Random Matrix Theory, Fourier Analysis, Multivariate Differential & Integral Calculus

Statistics Probability Theory, Mathematical Statistics, Generalized Linear Models, Experimental Design,

Data Mining, Computational Statistics, Theoretical Machine Learning, Optimization, Monte Carlo Methods, Reinforcement Learning, Statistical Consulting, R, Python