MATTHEW ESMAILI MALLORY

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EDUCATION

PhD in Statistics, Harvard University   2022–2027

B.S. in Mathematics, B.S. in Statistics, University of California, Los Angeles   2018–2022
Honors Collegium, Honors in Mathematics, 3.9 GPA

RELEVANT COURSEWORK

Mathematics	Real & Complex Analysis, Measure Theory, Group Theory, Ring Theory, Galois Theory, Linear Algebra, Differential Geometry, Topology, Ordinary & Partial Differential Equations, Fourier Analysis, Multivariate Differential & Integral Calculus, C++
Statistics	Probability Theory, Mathematical Statistics, Linear Modeling, Data Analysis, Regression, Modeling, Data Mining, Experimental Design, Computational Statistics, Machine Learning, Monte Carlo Methods, Optimization, Statistical Consulting, R, Python

RESEARCH

Research Experience for Undergraduates, Cornell University   Article
- Researched theoretical aspects of deep learning under Dr. Alex Townsend
- Proved a constant-width quasi-universal approximation theorem for operator neural networks

Independent Research in Asymptotic Statistics, UCLA   Article
- Studied large sample theory, approaching theoretical statistics through real analysis & measure theory
- Worked with Dr. Tsiang of the Statistics department, applying research toward real-life data analysis in R

Independent Research in Topological Data Analysis, UCLA
- Researched topological data analysis and persistent homology, applying techniques to real world data
- Compared contemporary data analysis methods with novel TDA approaches suited for high-dimensional data

Independent Research in Algebraic Statistics, UCLA
- Explored algebraic statistics, applying algebraic geometry and commutative algebra to statistical models
- Studied applications to Markov Chain Monte Carlo methods, genomic and cancer data

LEADERSHIP & WORK HISTORY

President, UCLA Undergraduate Mathematics Students Association	Mar 2019 - present
Undergraduate Researcher, UCLA Mathematics Department	Jan 2021 - June 2021
Mathematics Docent, Olga Radko Endowed Math Circles	July 2020 - Feb 2022
Linear Algebra Teaching Assistant, UCLA Learning Assistant Program	Nov 2020 - June 2021
Resident Technology Supervisor, UCLA Learning Centers	Sep 2019 - Jan 2021
Math Instructor, Kumon Institute	May 2017 - Jan 2018
Graphic Designer & Animator, Fiverr	Dec 2017 - May 2021

SKILLS

- Fluent in English, Spanish, Persian
- R, LaTeX, Python, C++
- Adobe PhotoShop, Illustrator, Premiere Pro, & After Effects
- Photography, Videography, Graphic Design, Animation