

# Anahita Bolourani

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## Education

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2024 – Present **University of California, Los Angeles (UCLA)**

Master of Science – Statistics & Data Science

March 2022 – Fall 2025 **UCLA — Samueli School of Engineering**

Doctor of Philosophy – Engineering

2016 – 2019 **University of Tehran, Tehran, Iran**

Master of Science – Engineering

2012 – 2016 **University of Tehran, Tehran, Iran**

Bachelor of Science – Engineering

## Publications

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Tak, A. N., Banayeeanzade, A., Bolourani, A., Kian, M., Jia, R., & Gratch, J. “Mechanistic Interpretability of Emotion Inference in Large Language Models,” *Findings of ACL*, in press, 2025.

Bolourani, A. Burton, H. Bozorgnia, Y. “Evaluating Procedures for Estimating Vertical Seismic Load Effects Specified in the U.S. Building Code,” *ASCE (JSE)*, (under review), 2024.

Bolourani, A. et al. “Structural health monitoring of using support vector machine and principal component analysis,” *Structures*, 2021.

Tak, A. N., Bolourani, A. et al. “BIM-based 4D mobile crane simulation and onsite operation management,” *Automation in Construction*, 2021.

Bolourani, A., Tak, A. et al. “Developing a BIM–SHM Integrated System for Disaster Risk Management Using Auto-Regressive Model,” 2019.

## Selected Coursework

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### Statistics & Data Science:

STATS M231A Pattern Recognition & Machine Learning,

STATS C261 Pattern Recognition & Machine Learning

STATS 200B Theoretical Statistics,

STATS 201A Research Design & Sampling,

STATS 200A Applied probability,

STATS 202A Statistical Programming

STATS C216 Applied Bayesian Social Statistics,

### Engineering & Mathematics:

Numerical Computation,

Advanced Engineering Mathematics,

Probability & Statistics for Engineers

## Certificates

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“Statistical Learning,” Stanford Online

Google Data Analytics Professional Certificate (4 courses)

“Neural Networks and Deep Learning,” DeepLearning.AI

## Research Experience

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2022 – Present **Graduate Research Assistant, B. John Garrick Institute for the Risk Sciences, UCLA**

- Investigate vertical seismic load effects using Community Seismic Network and JPL strong-motion data.

- Implement statistical models for ground-motion analysis.

2019 – 2021 **Graduate Research Assistant, University of Tehran**

Developed machine-learning pipelines for structural health monitoring of structures.

2017 – 2019 **Master’s Thesis – University of Tehran**

“Numerical Study of Structural Health Monitoring via SVM & PCA.”

## Teaching & Laboratory Experience

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2023 – Present **Teaching Assistant, UCLA Samueli School of Engineering** (7quarters)

2017 – 2019 **Teaching Assistant, University of Tehran** (5 Semesters)

## Awards & Honors

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ASCE Metropolitan Los Angeles *Le Val Lund Memorial Award*, 2024

ASCE Los Angeles Section *Outstanding Graduate Student Scholarship*, 2023 & 2024

UCLA *Summer Mentored Research Fellowship*, 2022

UCLA *Graduate Student Researcher Award*, 2022

Semi-finalist, Mathematics National Olympiad (Iran), 2011

## Technical Skills

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**Languages & Packages:** Python (NumPy, SciPy, Pandas, PyTorch, scikit-learn, ObsPy, Selenium, Matplotlib), R, MATLAB, SQL

**Machine Learning:** Large Language Models (LLM), Diffusion Models, Machine Learning (ML)

**Tools:** AutoCAD, LaTeX, Git