

Yasaman Mohammadpour

✉ ymoham15@asu.edu | ☎ (+1) 480-852-8521 | 🌐 Github
Arizona State University, 1151 S Forest Ave, Tempe, AZ 85281.

RESEARCH INTERESTS

- Clinical Risk Prediction
- Healthcare AI
- Multimodal Machine Learning
- Deep Learning
- Natural Language Processing
- LLMs

EDUCATION

Arizona State University

Ph.D. in Data Science, Analytics and Engineering

GPA: 4 out of 4

ARIZONA, USA

Spring 2026 – Present

- Relevant Coursework: Data Structures and Algorithms, AI for Nonlinear Dynamics, Data Mining, Data Processing at Scale

Arizona State University

M.Sc. in Psychology (Interdisciplinary Focus on Data Science and Statistics)

GPA: 4 out of 4

ARIZONA, USA

Spring 2024 – 2025

- Relevant Coursework: Behavioral Data Science, Quantitative Analysis, Professional Issues in Psychology, Cognitive Science, Research Methods, Advanced Social Psychology

University of Tehran

B.Sc. in Statistics

GPA: 17.57/20 (3.54 out of 4)

TEHRAN, IRAN

2017 – 2022

- Faculty Average GPA is 13.22
- Relevant Coursework: Regression, Continuous Multivariate Methods, Computational Statistics, Time Series, Design of Experiment, Sampling Methods, Probability, Fundamentals of Numerical Analysis, Biology, Mathematical Statistics, Strategic Games, Advanced Programming, Mathematics Analysis, Differential Equation, Discrete Multivariate Methods, Fundamentals of Computer Science and Programming

RESEARCH EXPERIENCE

Research Assistant, Electrical Impedance Tomography Project, ASU

ARIZONA, USA

Advisor: Dr. Malena Espanol

Summer 2026 - present

- **Project:** Developing a full-array and hemiarray Electrical Impedance Tomography (EIT) pipeline for biomedical conductivity imaging using finite element modeling and deep learning.
- Implemented and validated EIT data-generation and forward-modeling modules, including mesh/electrode setup, conductivity simulation, current injection patterns, and boundary voltage extraction.

Research Assistant, SHaDE Lab, ASU

ARIZONA, USA

Supervisor: Dr. Ariane Middel

Spring 2025 - present

- **Project:** Conducting real-time thermal comfort research, integrating MaRTiny sensor and airport weather data to estimate Mean Radiant Temperature (MRT) using physics-based models, applying machine learning interpolation to improve temperature mapping accuracy and spatial coverage.

Research Assistant, SHaDE Lab, ASU

ARIZONA, USA

Supervisors: Dr. Bjoern Hagen, Dr. Ariane Middel

Spring 2025

- **Project:** Assessing Heat Mitigation Potential of Various Urban Tree Species in an Arid Climate (ASU Tempe Campus)
- Conducted statistical analysis in R to evaluate how tree traits and ground cover impact MRT reduction.

Research Assistant, Emotion, Culture & Psychophysiology Lab, ASU ARIZONA, USA

Advisor: Dr. Nicholas Duran, Co-Advisor: Dr. Nicole Roberts *Summer 2024 - Spring 2025*

- **Thesis:** Enhancing Stress Detection Through Dynamic Mapping of Physiological Signals and Feature Engineering Using Wearable Data and Deep Neural Networks
- Designed and implemented a stress detection system using wearable device data and deep learning, focusing on real-world data preprocessing and data wrangling, interpolation, noise reduction, feature engineering, and robust machine learning models.

Research Assistant, Cognition, Behavior and Information Lab, ASU ARIZONA, USA

Advisor: Dr. Nicholas Duran *Spring 2024*

- **Project:** Analyzing Linguistic Interactions With Generalizable Techniques, A Python Library (assessing and updating ALIGN library with LLMs: GPT, RoBERTa, LLaMA).

Research Assistant, University of Tehran

TEHRAN, IRAN

Advisor: Dr. Hedieh Sajedi

Fall 2021 - Spring 2022

- **Thesis:** Applications of Artificial Intelligence in Ophthalmology
- Examined ethical considerations of Artificial Intelligence in Medicine and Ophthalmology.
- Developed AI systems for diagnosing Anterior Segment Diseases.

PUBLICATIONS

- **Scalable and Robust Thermal Comfort Sensing: A Machine Learning and Computer Vision Extension of the MaRTiny**, *A. Middel, Y. Mohammadpour, et al.* [Under Review]
- **Sentiment and Social Signals in the Climate Crisis: A Survey on Analyzing Social Media Responses to Extreme Weather Events**, *Y. Mohammadpour, et al.* [Accepted - SBP-BRiMS 2025]
- **Dynamic Mapping of Physiological and Perceived Stress States: A Heart Rate Variability Study with Police Cadets Using Wearable Trackers**, *N. Duran, Y. Mohammadpour, N. Roberts, et al.* [Manuscript]
- **Assessing Heat Mitigation Potential of Various Urban Tree Species in an Arid Climate**, *B. Hagen, Y. Mohammadpour, et al.* [Under Review]

ACADEMIC TEACHING EXPERIENCE

Teaching Assistant, Arizona State University

TEMPE, ARIZONA

Principles of Programming Language

Summer 2026

Teaching Assistant, University of Tehran

TEHRAN, IRAN

Mathematical Analysis 1

Spring 2021

Teaching Assistant, University of Tehran

TEHRAN, IRAN

Continuous Multivariate Methods 1

Spring 2021

- Supervised students in project research and development.

Teaching Assistant, University of Tehran

TEHRAN, IRAN

Differential Equations

Spring 2022

Teaching (over 2 years experience), Pre-University Level

TEHRAN, IRAN

Mathematics and Statistics

Fall 2017 - Fall 2019

- Taught over 20 private classes in Mathematics and Statistics.

SKILLS

- **Programming Languages:** Python (Proficient), R Program (Proficient), MATLAB (Proficient), C++ (Proficient), MINITAB (Proficient), SAS (Statistical Software), SPSS, STATA

- **Machine Learning & Data Science:** LLMs, PyTorch, TensorFlow, Scikit-learn, Numpy, Pandas, Matplotlib, Jupyter Notebooks
- **Specialized Area:** Data Analysis, Data Science, Machine Learning, Data Mining, Deep Learning (including LLMs), Data Processing, Neural Networks, Psychological Assessment, Feature Design and Engineering
- **Research Skills Concepts:** Data Preprocessing, Data Visualization, Sentiment Analysis, Supervised / Semi-Supervised / Unsupervised Learning, Reinforcement Learning, Dimension Reduction, Large-scale Model Training
- **Operating Systems:** Windows, Ubuntu

SELECTED COURSE PROJECTS

Predicting Parolee Recidivism SPRING 2024

- Using Logistic Regression, Feature Engineering, Visualization.
- Analysis and interpretation of the dynamics of criminal behavior and rehabilitation.

Predicting Toxic Comment Classification Analysis SPRING 2024

- Using Logistic Regression, K-Nearest Neighbors, and Naive Bayes.
- Enhanced analysis with cross-validation and tf-idf embeddings.

Speech-based PTSD Prediction SPRING 2024

- Processed text data using NLP techniques (stopwords, lemmatization, sentiment via transfer learning) and classified PTSD discussions with ML models including Naive Bayes, Logistic Regression, Random Forest, and Neural Networks.

Unsupervised Market Segmentation Clustering Analysis SPRING 2024

- via Elbow Method and Silhouette Scores.
- Employed k-means and hierarchical clustering techniques on mall customer data.

The Performance of Knowledge-based Enterprises in Covid-19 Pandemic FALL 2021

- Analyzed the strategic performance of knowledge-based enterprises during the pandemic.

Application of Neural Networks in Game Theory FALL 2021

- Developed and analyzed neural network models to optimize game theory strategies.

PRESENTATIONS AND CERTIFICATES

ASU Digital Health Summit Poster *Spring 2025, ASU*

- Presented a research poster on physiological and statistical stress detection using wearable device data.

Brown Bag Colloquium *Fall 2024, ASU*

- Presented an ongoing project on stress detection using Fitbit and textual survey data.

IBR-Social Behavioral Research from CITI Program *Spring 2024, ASU*

Leadership of the Open-Door Event *Spring 2024, ASU*

- Led the organization and execution of a lie detection event, directing setup and coordination across three lab areas.

HONORS AND AWARDS

- Reviewer for a peer-reviewed journal manuscript, *ASU, summer 2025*.
- Selected as the only master's student judge at the Arizona Psychology Undergraduate Research Conference (AZPURC) to evaluate undergraduate presentations, *ASU, Spring 2025*.
- Recipient of Full Bachelor's and Master's Tuition Waiver Fellowship, *ASU and UT, Fall 2017 - Spring 2025*.

REFERENCES

- **Dr. Nicole Roberts**, School of Social and Behavioral Sciences, Arizona State University
Email: nicole.a.roberts@asu.edu
- **Dr. Ariane Middel**, School of Computing and Augmented Intelligence, Arizona State University
Email: ariane.middel@asu.edu