

Pedram Esmailpour

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OBJECTIVE

I genuinely enjoy teaching and explaining technical concepts. Through my TA experience, I've discovered how rewarding it is to help others understand complex topics. I'm looking for a role where I can continue supporting student learning in technical subjects while developing my teaching skills.

EDUCATION

Bachelor of Science | 2022 - present

Mathematics and Applications, Amirkabir University of Technology, Tehran, Iran

Diploma | 2019 - 2022

Mathematics and Physics, Hasheminejad 3, Mashhad, Iran

WORK EXPERIENCE

Volunteer Work Experience

April 2024 - May 2025

Chairman of 18th Scientific Students Committee of Mathematics and Computer Science of Amirkabir University of Technology

April 2023 - March 2024

Member of 17th Scientific Students Committee of Mathematics and Computer Science of Amirkabir University of Technology

Undergraduate Teaching Assistant

TA, Introduction to Image Processing (Winter and Spring 2026)

Dr. Mostafa Shamsi

TA, Artificial Intelligence (Winter and Spring 2026)

Dr. Mehdi Ghatte and Behnam Yousefimehr

TA, Artificial Intelligence (Fall 2025)

Dr. Mehdi Ghatte and Behnam Yousefimehr

TA, Computer Networks (Fall 2025)

Dr. Mohammad Hassan Shirali-Shahreza

TA, Advanced Artificial Intelligence (Fall 2025)

Dr. Mehdi Ghatte and Behnam Yousefimehr

Head TA, Advanced Programming (Winter and Spring 2025)

Dr. Mehdi Ghatte and Behnam Yousefimehr

Supervised a team of 20 TAs in developing a new curriculum for object-oriented programming and database fundamentals using Java. Managed the creation and grading of coding assignments, and organized weekly workshops sessions.

TA, Mathematics Softwares (Winter and Spring 2026)

Dr. Amin Hosseingholizadeh

Head TA, Advanced Programming (Winter and Spring 2026)

Dr. Rouhollah Ahmadian

Supervised a team of 22 TAs in revising documents, devising weekly assignments and organizing online weekly workshop sessions, focusing on object-oriented programming with Java, Git and SQLite database fundamentals.

Head TA, Data Structures and Algorithms (Fall 2025)

Dr. Mahsa Saadat

Led a team of 14 teaching assistants. Directed the design, assignment, and grading of monthly homeworks. Coordinated and oversaw weekly workshop sessions to reinforce course concepts.

TA, Design and Analysis of Algorithms (Winter and Spring 2025)

Dr. Fatemeh Zare-Mirakabad

TA, Basic Programming (Fall 2024)

Dr. Fatemeh Zare-Mirakabad

SKILLS

Programming Languages

Python (Advanced)
Java (Advanced)
C (Intermediate)
Go (Intermediate)

Tools

LaTeX (Advanced)
Git (Intermediate)
MySQL (Intermediate)

Core

Machine Learning
Neural Networks
Algorithmic Thinking
Linear Algebra
Integer Programming

Soft Skills

Communication
Time Management
Problem-Solving
Fast Learning
Organization

MINI-PROJECTS

Patch-based Image Denoising via Higher Order SVD [Link](#)

A near complete implementation of the denoising method in the paper "Image Denoising using the Higher Order Singular Value Decomposition". This project uses Python language and vast libraries to apply this algorithm for grayscale images, and evaluates it by applying the method on the dataset "CBSD68" and calculating different image-difference scores.

Solving College Admissions by Integer Programming [Link](#)

A review and implementation on the paper "College admissions with ties and common quotas: Integer programming approach". This project uses Pyomo framework to implement 9 different MILP formulations with College Admission problem, tested by generated data.

Skip List Implementation [Link](#)

Learning Neural Networks [Link](#)

A collection of all projects and mini-projects I've developed in the field of neural networks. These projects were done with the goal of gaining more knowledge in the neural networks field, starting from MLP and moving towards more complex neural networks, eventually focusing on deep learning models such as CNNs and GNNs.

Simple Clustering on News Articles Passage [Link](#)

Primal-Dual Calculator with GUI [Link](#)

Comparison of UMAP Variants for Dimension Reduction [Link](#)

Graph Clustering and Link Prediction [Link](#)

Analysis and Classification of $NF-ToN-IoT-V2$ Dataset [Link](#)

CERTIFICATES

Task-Oriented Course In SQL

2025 | Quera College | [View Certificate](#)

Task-Oriented Course In Version Control With Git

2025 | Quera College | [View Certificate](#)

Tech Olympics 2025 (Golang) Completion

2025 | Iran Tech Olympics and Quera | [View Certificate](#)

Advanced Algorithmic Thinking And Data Structure Course

2024 | Quera College | [View Certificate](#)

Scrum Foundations Course

2024 | Ultimate Training Tech Co. | [View Certificate](#)