Arman Borjikhani
armanborjikhani16@gmail.com

Education

B.Sc. Applied Mathematics (Minor: Computer Science)
Amirkabir University of Technology

Coursework: AI, Deep Learning, ML with Graphs, Numerical Linear Algebra, Optimization, Probability, Algorithms, Theory of Computation

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Research Interests

Artificial Intelligence, Computational Data Mining, NeuroAI, Numerical Linear Algebra in AI, Brain-Inspired Computing

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Projects

Image Segmentation with ML Models

Implemented segmentation using MLPs, CNNs, and Random Forests.

Evaluated models with Precision, Recall, and F1 metrics.

Graph Algorithms & Planarity Testing

Implemented Hopcroft–Tarjan algorithm and dual graph construction.

Applied shortest-path methods for minimum cut problems.

Numerical Linear Algebra Applications

Developed Thomas algorithm with LU decomposition for tridiagonal systems.

Benchmarked against NumPy for efficiency.

Skill

Programming: Python, C#, MATLAB, JavaScript, HTML/CSS

AI/ML: Neural Networks, Random Forests, Optimization

Mathematics: Linear Algebra, PDEs, Probability, Combinatorics

Tools: Git/GitHub, Jupyter, NumPy, SciPy, TensorFlow/PyTorch

Achievements & Activities

Completed Neuromatch Academy (128-hour *Computational Neuroscience* program).

Consistently scored >90% in AI, CS.