

Matin Monshizadeh

University of Bologna | Bologna | Italy

[✉ matin.monshizadeh@studio.unibo.it](mailto:matin.monshizadeh@studio.unibo.it) [in matin monshizadeh](https://www.linkedin.com/in/matin-monshizadeh) [G matinmonshizadeh](https://github.com/matinmonshizadeh) [A ArtStation](https://www.artstation.com/matinmonshizadeh)

EDUCATION

University of Bologna Candidate, M.Sc. in Artificial Intelligence	Bologna, Italy 2025 - Present
Shiraz University Graduate, B.Sc. in Computer Engineering	Shiraz, Iran 2020 - 2024

RESEARCH INTERESTS

- Computer Vision
- Computer Graphics
- Image Processing
- Machine Learning

RESEARCH & TECHNICAL EXPERIENCES

Junior Computer Vision & Graphics Engineer <i>Deed Asia Development Group Ltd</i>	Nov 2024 - Mar 2025
<ul style="list-style-type: none">• Engineered 3D roof models from megatile images and point clouds via mathematical plane fitting, normal vectors, and precise edge alignment.• Deployed YOLO and depth estimation models (Depth Anything, Depth Pro) for structural segmentation, edge classification, and obstacle removal.• Accelerated heavy image processing pipelines and spatial datasets using matrix vectorization and multi-threading.	
3D MOUNTAIN SIMULATION: PREDICTING FLOOD PATHS <i>Academic Research</i>	Jun 2024 - Sep 2024
<ul style="list-style-type: none">• Simulated 3D terrain, predicted flood paths, and calculated water volume using real-world elevation data in Python.• Applied Delaunay triangulation to model the terrain and utilized gradient-based methods to predict water flow.• Visualized water accumulation in lower elevations, such as valleys and flat areas, through 3D terrain plots, flood paths, and a heatmap of accumulated water volume.	

PROJECTS

PREDICTING MOBILE PRICES <i>Linear Algebra</i>	Jul 2024
Extracts data from an e-commerce site, cleans it, trains a linear regression model to predict mobile prices, and includes a Tkinter-based app for price prediction based on mobile features. Github	
PAC-MAN <i>Computer Graphics</i>	Jul 2024
Pac-Man game in Python and OpenGL with ghost AI using a greedy algorithm, collision detection, teleporting pathways, and dynamic gameplay where Pac-Man can eat ghosts after power-ups. Github	
DIABETES PREDICTION <i>Artificial Intelligence</i>	Jul 2023
A user-friendly desktop application implemented with Python that utilizes a logistic regression model to predict the probability of a user's diabetes based on their inputted information. Github	
SMART HOME <i>Microprocessors</i>	Jul 2023
Implemented and simulated a simple, smart home with C programming language with three main objectives: Security, Temperature Control, and Lighting Control using ATmega32 microcontrollers and SPI protocol to transmit data. Github	
IMAGE COMPRESSION & STEGANOGRAPHY <i>Design and Analysis of Algorithms</i>	Feb 2023
Implemented Huffman coding for image compression and used LSB algorithm for steganography and programming these with Python. Github	
PSEUDO INSTAGRAM <i>Object Oriented Programming</i>	Feb 2021
Implementation of Pseudo Instagram with Java programming language and Using JOptionPane for GUI. Github	
SUDOKU SOLVER <i>Fundamentals of Programming</i>	Feb 2020
Implemented Sudoku Solver with Python programming language and used Pygame library for an interface. Github	

VOLUNTEER EXPERIENCE

TEACHING ASSISTANT *Department of Computer Engineering* Sep 2023 - Jan 2024
Teaching Assistant in Database Design Principles and Operating Systems courses.

WEB DEVELOPER *Freelancer* Dec 2022 - Jun 2024
Managed the web development team for the Rody Plus online shop (rodyplus.com) and worked as a front-end developer for Abrak Studio (abrak.studio).

7TH HOUR OF CODE EVENT *Organized by ACM Association of Shiraz University* Mar 2022 - Jul 2022
Head of an informatics group, worked on frontend development with Vue.js and Vuetify frameworks and supervised the other parts of the informatics group. Also taught Python to students. Website: hocshirazu.ir

TEACHING ASSISTANT *Department of Computer Engineering* Feb 2022 - Jun 2022
Teaching Assistant in Fundamentals of Computer and Programming (Python) and Object Oriented Programming (Java) courses.

CS:GO TOURNAMENT *Organized by ACM Association of Shiraz University* Jan 2022 - Feb 2022
Tournament organizer for CS:GO (Counter-Strike: Global Offensive) competitions at Shiraz University, featuring eight teams. These events included live match streaming and comprehensive reports. Notably, some of Iran's top players participated in the tournament.

HONORS AND AWARDS

NATIONAL MATHEMATICS AND PHYSICS UNIVERSITY ENTRANCE EXAM
Top 0.9% among over 155,000 participants.

SKILLS

PROGRAMMING LANGUAGES: Python, C, C++, Java, R, SQL and familiar with Verilog and Assembly (x86 assembly).

WEB DEVELOPMENT: JavaScript, HTML, CSS. Experienced in Vue.js, Angular, Vuetify, Bootstrap, and jQuery web frameworks.

RELEVANT COURSES: Have worked on Statistics and Probability, Machine Learning, Data Mining, Numerical Analysis, Linear Algebra, Graph Theory and Algorithms, Artificial Intelligence, Computer Graphics, Database Design Principles, Operating Systems, and the Theory of Languages & Automata, and familiar with Operations Research and Evolutionary Computation.

OTHER TECHNOLOGIES : Git, LaTeX, and some Python libraries such as NumPy, Pandas, Matplotlib, OpenGL, Open3D, Scikit-learn, TensorFlow, PyTorch, SciPy, Pygame, Tkinter, Selenium, Pillow, and OpenCV.




LANGUAGES

- Persian: Native
- English

HOBBIES

- Working out at the gym
- Analyzing and translating music lyrics ([Genius](https://www.genius.com))
- Playing video games

REFERENCES

- [Dr. Ali Hamzeh](#), Professor of Computer Science @ Shiraz University.
 ali@cse.shirazu.ac.ir
- [Dr. Mostafa Fakhrahmad](#), Assistant Professor of Computer Science @ Shiraz University.
 mfakhrahmad@gmail.com
- [Dr. Morteza Keshtkaran](#), Assistant Professor of Computer Science @ Shiraz University.
 morteza.keshtkaran@gmail.com