

Mohammad Mehdi Afkhami Aqda

Yazd – Iran

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📄 Mohammad-Mehdi-Afkhami

Education

Vali-e-Asr University of Rafsanjan

Rafsanjan, Iran

B.Sc. Computer Engineering

2018–Present

- Last 60 credits GPA without calculating summer semester: 16.6/20
- CGPA: 16.1/20, 131 credits
- Major Area: Software Engineering.
- Thesis: Solving community detection problem using evolutionary algorithm in social networks
- Thesis grade: -/20

Publications

- Fahimeh Dabaghi-Zarandi, **Mohammad Mehdi Afkhami**, Mohammad Hosein Ashoori, Parsa KamaliPour, Mohammad Amin Ahmadi, "Solving community detection problem using evolutionary algorithm in social networks" (*will be submitted soon*)
- Fahimeh Dabaghi-Zarandi, Mohammad Hosein Ashoori, Parsa KamaliPour, Mohammad Amin Ahmadi, **Mohammad Mehdi Afkhami**, "A deep learning approach to community detection." (*in preparation*)

Experience

Research

Undergraduate Research Assistant ✉

Rafsanjan, Iran

Department of Computer Engineering, Vali-e-Asr University of Rafsanjan

Jan 2022–Present

- Supervisor: Dr. Fahimeh Dabaghi-Zarandi
- Field: Community Detection
- My responsibilities include: Gathering information, Reading papers, Programming, Testing the solution, Writing first draft of the paper.

Teaching

Undergraduate Teaching Assistant

Rafsanjan, Iran

CE Department, Vali-e-Asr University of Rafsanjan

Mar 2021–Present

Design and Analysis of Algorithms

▶ Dr. Fahimeh Dabaghi-Zarandi

Fall 2022, Spring 2022, Fall 2021, Spring 2021

Data Structures

▶ Dr. Fahimeh Dabaghi-Zarandi

Fall 2022, Spring 2022, Fall 2021, Spring 2021

Artificial Intelligence

▶ Dr. Amir Hossein Hadjahmadi

Fall 2022

Database

▶ Dr. Mojtaba Sabbagh-Jafari

Fall 2022

Fundamentals of Programming

▶ Dr. Amir Hossein Hadjahmadi

Fall 2022

Discrete Mathematics

▶ Dr. Fahimeh Dabaghi-Zarandi

Fall 2021, Spring 2022

Operating Systems

▶ Dr. Fahimeh Dabaghi-Zarandi

Spring 2022

Instructor for The Summer Coding Bootcamp

Vali-e-Asr University Scientific Association of Computer Engineering

Summer 2022

Teaching game development & software architecture using Unity3D & Blender

Others.....

Team Co-Founder & Game Developer

Null References [↗](#) , Indie Game Development Team

Feb 2020–Present

Research Interests

- Computer Graphics
- Agent-Based Modelling
- Crowd-sourcing
- Procedural Content Generation

Selected Relevant Coursework

Computer Graphics: 20/20

Advance Programming: 20/20

Discrete Mathematics: 18.36/20

★ [Click here to see more](#) [↗](#)

Data Structure: 19.67/20

Artificial Intelligence: 20/20

Software Engineering: 18/20

Selected Projects

Uncertainty [↗](#)

An action-adventure space-shooter game

Feb 2021–Present

We utilized software architecture principles such as design patterns and agile methodologies to overcome challenges which included management of artistic and programming aspects of the game. At the moment, the game is in development

OpenGL Game [↗](#)

A 3D game made using OpenGL

Spring 2020

Developed skills in writing C++ code for OpenGL and its shading language, as well as knowledge of 3D object formats

Automata Simulator [↗](#)

Simulator that supports DFA, DPDA, and Turing machines, for educational purposes

Spring 2020

The logic was implemented using an observer pattern and the user interface was based on simple bezier curves

Multiple projects regarding to Artificial Intelligence course [↗](#)

Implementation of:

Fall 2021

BFS, DFS, IDS, UCS (uninformed search strategies), 8 puzzle solver using A-star & IDA (informed heuristic search strategies), Genetic algorithms, Simulated annealing (local search), Min-Max, Alpha–Beta (adversarial search), classification of a dataset (basic machine learning), Knowledge representation using prolog

Multiple projects regarding to Design and Analysis of Algorithms course [↗](#)

Implementation of:

Fall 2020

The closest pair of points problem, Convex hull, Sudoku solver, Tournament scheduler, Huffman coding, Bellman–Ford, Matrix chain multiplication, N-Queens solver, Travelling salesman problem

Symmetry [↗](#)

A game made using Unity

Spring 2020

game was designed to test our short-term memory for visual information

Quine McCluskey [↗](#)

Implementation of:

Spring 2019

the Quine McCluskey minimization method for boolean functions, windows presentation form was used for user interface

Multiple projects regarding to Data Structures course [↗](#)

Implementation of:

Fall 2019

Maze & Rat, Red-Black tree, AVL tree, Trie dictionary, Sparse matrix

★ [Click here to see more projects](#) ↗

Test Scores

TOEFL: On November 19th, 2022

Extra Curricular Activities

Member of Teaching Assistant Committee

Vali-e-Asr University Scientific Association of Computer Engineering

Jul 2022–Present

Vali-e-Asr University of Rafsanjan

President of Executive Staff

Video Games Association

Oct 2020–Jun 2021

Vali-e-Asr University of Rafsanjan

Member Of Scientific Committee

Computer Engineering Scientific Association

May 2019–Jun 2021

Vali-e-Asr University of Rafsanjan

Computer skills

Art & Game Development: Unity, Blender, Krita, **Programming Languages:** C, C++, C#, Python, Godot(basic) MATLAB, Java, SQL, CSS

Frameworks & Libraries: OpenGL, Numpy, Pandas, **Software Engineering:** Refactoring , Debugging, Unit Testing, Agile Methodology, Design patterns, Matplotlib SOLID

Tools: Jupyter Notebook, \LaTeX , Git, Markdown, **Soft Skills:** Team Work, Collaboration, Teaching, Linux, Obsidian, MS Office Research, Problem Solving

Languages

Persian: Native language

English: Fluent

References

Available upon Request