ARMIN KAZEMI

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EDUCATION

BSc. Computer Engineering, Amirkabir University of Technology 2015 - 2020

- Cumulative GPA: **17.73/20 (3.65/4)**
- Selected Courses: Computer Engineering Project (20 / 20) — Artificial Intelligence & Expert Systems (20 / 20) Data Mining (20 / 20) — Algorithm Design (20 / 20) — Advanced Computer Programming (20 / 20)

RESEARCH INTERESTS

- Computer Graphics
- Computer Vision
- GANs
- Visualization
- Machine Learning
- Deep Learning

PUBLICATIONS

- A. Kazemi, N. Gholipour, H. Faragardi, A. Abderezaei and H. Fotouhi, **"Optimizing Sink Node Placement in Wireless Sensor Networks,"** Sensors 2021. (Under prep.)

NOTABLE PROJECTS

Detecting COVID Hotspots and Crowdedness in Public Places IoT, Machine Learning, MQTT

As my BSc. project, Implemented a Internet of Things solution in order to detect crowded areas by analyzing wireless (Wi-Fi and Bluetooth) footprint from smartphones. Moreover, utilizing Machine Learning to predict crowdedness in future days. (view on Github)

Chess Bot Python, Tensorflow, Convolutional Neural Networks, Computer Vision

Created a Computer Vision Algorithm to detect chessboard on the screen, Implemented a CNN to extract current position on the Chessboard then feeding the FEN (Forsyth–Edwards Notation) to a chess engine and automatically play the game. (view on Github)

Reversi AI Java, Classic Artificial Intelligence, Minimax with A/B Pruning

Created an Artificial Intelligence for the Reversi (also known as Othello) boardgame, which uses Minimax with A/B pruning, also adapted some Machine Learning techniques for better evaluation of game positions. (view on Github)

Eye Tracking in VR headsets Python, OpenCV

Implemented a Computer Vision algorithm for detecting user's gaze point in VR headsets using a embeded camera behind the VR lens. (view on Github)

Persian News Search Engine Python, Angular, TF-IDF, Inverted Index, KMeans, Crawler

Implemented a Persian language news search engine. Including a front-end UI, a Crawler and the engine itself. The engine utilizes Mini-Batch-KMeans for large scale clustering and TF-IDF algorithm for intra-cluster searching. Moreover, some stemming techniques has been put to use. (view on Github)

PoorCraft Java, Isometric Game Engine, Strategic Game, Network Game

Created a isometric strategic game as a part of our Advanced Programming course. Game mechanics are similar to the famous Age of Empires game. Includes LAN multiplayer mode and also a map editor. (view on Github)

ShaderToy.NET C#, GLSL, OpenGL

Implemented a testing and developing environment for GLSL shaders. GLSL is a special code which is executed on GPU to achieve graphical effects. (view on Github)

Ray Casting and Line of Sight Simulator Java, Ray Casting

Implemented two dimensional ray casting algorithm in Java. Used to estimate robot's vision area. (view on github)

Sayeh CPU VHDL, Hardware Design

Designed a simple 16-bit SISD CPU using VHDL with a limited instruction set. and also created a basic compiler for the designed architecture. (view on github)

TEACHING EXPERIENCE

Teaching Assistant Data Mining (Under Supervision of Dr. Nazerfard) Oct 2019 - Jan 2020

Teaching Assistant Artificial Intelligence (Under Supervision of Dr. Nickabadi) Feb 2018 - Jul 2018

Teaching Assistant Advanced Programming (Under Supervision of Dr. Pourvatan) Feb 2017 - Jul 2017

Teaching Assistant Fundamentals of Programming (Under Supervision of Dr. Pourvatan) Oct 2016 - Jan 2017

SKILLS

Programming Languages	Python, Java, Javascript, C#, C++, Swift, Kotlin, Ruby, Racket
Data Mining & AI	Tensorflow, Numpy, Pandas, Jupyter Notebook
Web Development	Node.js, Angular, SCSS, Flask
Mobile Development	Android, iOS
Database	MongoDB, MySQL
Graphics and Visualization	GLSL, OpenGL, WebGL, Processing
Embeded Systems & Hardware	Arduino, Raspberry Pi, VHDL
Other	Git, Docker, LaTeX

LANGUAGE SKILLS

English, IELTS

Overall: (7.5 / 9): Listening: (8.5 / 9) — Reading: (8 / 9) — Writing: (6.5 / 9) — Speaking: (7.5 / 9)

Persian, Native
Azarbaijani, Native

HONORS AND AWARDS

- Appointed as team leader and mentor for Amirkabir University Rescue Robotics Team (Team SOS) 2018
- Ranked in top 0.2% among all students in university entrance exam (Approximately 250000 applicants) in Math. and Eng. 2015
- Awarded Khwarizmi Young Award (KYA) for Developing a novel Mathematical Modeling software. Achieved 6th place among all participants. 2014

HOBBIES

Hiking, Skiing, Rock climbing, Camping, 3D Printing, Playing board-games (especially Chess) and Watching movies

REFERENCES

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