

Amir Khonsari

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SUMMARY

I'm a Software Engineering student who enjoys solving problems and creating efficient solutions. I have a strong understanding of programming, algorithms, and system design. I'm always eager to learn and improve my skills. I adapt quickly and work well in fast-paced environments.

SKILLS

Programming Languages: Javascript, HTML, CSS, Python, C, C++

Front-end Development: React, Tailwind CSS, Bootstrap, UIKit

Back-End Technologies: Django, Flask, MongoDB, REST APIs

Databases: MySQL, SQLite, MongoDB, PostgreSQL

Other tools: Microsoft Office, Figma, Canva, Adobe Photoshop, Wordpress, Shopify, Squarespace

Cloud Technologies: Azure

Software Development Practices: Software Development Life Cycle, Unit Testing, Debugging, Agile Methodologies, Software Integration, Software Testing, Testing Tools

Soft Skills: Good Communication, Problem-Solving, Time Management, Teamwork skills, Flexibility, Critical Thinking Skills, Decision Making, Quick Learner, Organization

Operating Systems & Tools: Linux, Bash, Git, Github

Embedded Systems & IoT: Arduino, Raspberry Pi, Sensors, Microcontrollers

AI & Machine Learning: Supervised & Unsupervised Learning (K-means, Regression, Decision Trees), AI Search Algorithms (BFS, DFS, Minimax, Monte Carlo, Alpha-Beta Pruning), scikit-learn, TensorFlow, PyTorch

Game Concepts: Matchmaking, Decision Trees, Game Logic (via AI Agent project)

PROJECTS

Library Management System, Data Structures and File Processing, Jan 2024 - Apr 2024 | [Link](#)

- Designed and implemented a C-based library system to manage books, eBooks, and digital media
- Applied structured programming and memory management to efficiently track and update library resources

Automated Weather Station (AWS), Object-Oriented Programming, May 2024 - Aug 2024 | [Link](#)

- Developed a weather monitoring system that processes climate data, calculates statistics, and detects seasonal changes • Used C++ inheritance to create a structured hierarchy of climate data models

Secure File Sharing Platform, Cybersecurity & Web Development, Nov 2024 – Dec 2024 | [Link](#)

- Developed a secure file-sharing system with user authentication, encryption, and hashing for file integrity validation • Implemented security features for secure upload, download, and access control.

COVID-19 Data Analysis, Data Structures & Visualization, Jan 2025 – Feb 2025 | [Link](#)

- Extracted and processed COVID-19 data for 40 U.S. states from Excel files, analyzing over 10,000 data points using Python, Pandas, and NumPy for efficient data manipulation
- Designed and implemented sorting and searching algorithms, reducing data retrieval time by 30% to identify case trends across regions
- Created 15+ statistical plots and visualizations with Matplotlib, delivering actionable insights on infection rates and trends to support data-driven decision-making

Interactive Web Portfolio, Dec 2024 – Jan 2025 | [Link](#)

- Designed and developed a fully responsive personal portfolio using HTML, CSS, and JavaScript, ensuring cross-browser compatibility and optimized performance. Used Bootstrap and Flexbox for a mobile-friendly layout.

AI and Machine Learning Projects, Algorithm Design & Data Science, Jan 2025 – Feb 2025

- Implemented search algorithms (DFS, BFS, A*, Uniform Cost) for pathfinding in Pacman
- Designed adversarial and stochastic AI agents using Minimax and Expectimax algorithms
- Designed graph algorithms such as Dijkstra's for shortest paths and Kruskal's for minimum spanning trees

Server-Client Communication, UNIX Sockets & Synchronization, Feb 2025 – March 2025

- Developed a synchronous server-client system using AF_UNIX, SOCK_STREAM sockets
- Implemented interprocess communication where the server issues commands and client responds
- Designed a structured message protocol for PID retrieval, sleep execution, and controlled termination
- Ensured proper error handling, socket cleanup, and debug logging for reliable operation

Marital Outcome Prediction | Data Mining & Machine Learning, Oct 2025 – Dec 2025

- Built predictive models to analyze marital outcomes using psychological and contextual data
- Applied **Decision Trees** and **clustering techniques** on UCI Divorce Predictors and NSFG (2017–2019) datasets
- Performed data preprocessing, feature selection, and visualization using Python

Smart Cane | Embedded System & IoT, Oct 2025 – Dec 2025

- Designed a smart cane using sensors and microcontrollers to assist with obstacle detection
- Processed sensor data to improve user safety and system responsiveness

IT Support & Hardware Troubleshooting

- Provided technical support to colleagues by diagnosing and fixing computer hardware and software issues.
- Assisted users with network configurations, software updates, and security settings.
- Managed troubleshooting hardware failures and software crashes to restore system functionality.

EDUCATION

SENECA POLYTECHNIC
Bachelor of Engineering - Software Engineering

North York, ON
January 2024 - Present

Relevant Coursework: Data Structures and Algorithms, Object-Oriented Programming, Software

Development Lifecycle (SDLC), Database Management Systems, Web Development, Operating Systems, Agile Software Development, Artificial Intelligence

AZAD UNIVERSITY

Bachelor of Science - Applied Chemistry

Iran, Tehran

Jan 2015 - Jan 2019

WORK EXPERIENCE

Associate

May 2019 - May 2020

Saman Bank Brokerage, Tehran, Iran

- Regularly compiled financial data from multiple sources using Microsoft Excel and SQL for data extraction and analysis.
- Synthesized internal financial reports which contributed to company operation.

IT Assistant – Veterinary Hospital

May 2017 - April 2019

Oxygen Hospital, Tehran, Iran

- Provided IT support in a veterinary hospital, troubleshooting computer operating systems, printers, networks, and security cameras.
- Installed and configured hardware, software applications, and network devices for hospital operations.
- Assisted hospital staff with software issues, system updates, and security protocols for daily operations.

Mobile App Developer (IOS)

May 2025 - Aug 2025

Krachi's Space Technologies

- Developed a mobile application using React Native to connect and control a company device (safe box)
- Built a chatbot for the company web application to support user interaction and automation