

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.

EDUCATION

Jan 2023 - Jan 2027

Bachelor of Software Engineering

Seneca Polytechnic, Toronto, ON, Canada

Bachelor of Science in Applied Chemistry

Jan 2015 - Jan 2019

Azad University, Tehran Medical Branch, Tehran, Iran

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 40 states for COVID-19 data from Excel files using Python, Pandas and NumPy for data processing
 - Implemented sorting and searching algorithms to analyze case trends efficiently
 - Used Matplotlib to generate statistical plots and visualizations for data-driven insights
- **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
- **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.

TECHNICAL SKILLS

Programming Languages: Python, C, C++, SQL, JavaScript

Web Development: HTML, CSS, JavaScript, Django, Flask, JSON, WeWeb

Front-End Technologies: Bootstrap, UIKit

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

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

Operating Systems & Tools: Linux, Bash, Git

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

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 to ensure smooth daily operations.