



Ali Kargar

Software Engineer

Contacts

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Language

Persian ○ ○ ○ ○ ○

English ○ ○ ○ ● ●

About me

Motivated Computer Engineering graduate with strong skills in Python and C, experienced in software development, algorithms, and system design.

Skilled in building scalable applications with React and SQL, and familiar with Linux and compiler construction.

Passionate about creating efficient solutions and contributing to innovative software projects.

Experiences

2025 - 2026

● Network and OS Labratory

● Core dump handling

- Architected and integrated a robust error-reporting infrastructure using Crashpad and Breakpad, enabling automated core dump collection and analysis for mission-critical applications.
- Optimized system stability by implementing specialized handlers for post-mortem debugging, which reduced the diagnostic time for memory-related crashes.

● Observability & Data Analysis

- Deployed and configured a centralized observability stack using Prometheus and Grafana to monitor system health and visualize offline performance metrics.
- Enhanced log management and troubleshooting efficiency by integrating Loki for high-cardinality log aggregation, leading to a faster root-cause analysis.

Courses

Data Structure ↗

UCSandDiego

11/2023

Algorithmic Toolbox ↗

UCSandDiego

11/2023

Deep Learning ↗

Neuromatch Academy

07/2025

Projects

Gymbato ↗

Online Sports Coaching Platform Developed a fitness platform that connects users with personal coaches, providing workout programs, in-app chat, and progress tracking. Implemented user authentication, coach-trainee interactions, and program management.

Technologies: React, Material UI, Figma.

MCP Serve project with DSL ↗

Developed a specialized MCP (Model Context Protocol) Server that enables Claude AI to interact with a custom Domain-Specific Language. The system allows users to provide high-level instructions, which are then parsed and translated into executable Python code, facilitating seamless automation and process coordination through an LLM interface.

Technologies: ANTLR4, Python.

Saliency Map Prediction ↗

Built and trained a deep learning model for visual saliency map prediction, exploring transfer learning strategies with VGG-16 as the backbone. Compared frozen vs trainable approaches and visualized performance differences.

Technologies: Python, PyTorch, Matplotlib, Numpy.

HUD System ↗

Designed and engineered a Head-Up Display (HUD) system using an ESP32 and a custom Android application to bridge mobile notifications via BLE. Implemented a notification listener service in Java for real-time filtering and data transmission, while developing a sophisticated GUI on a TFT display using the LVGL library for embedded visualization.

Technologies: C++, Arduino, LVGL, Java, Android Studio.,

Skills

| | | | |
|----------------|-----------|-------------|-----------|
| C | ● ● ● ● ○ | Python | ● ● ● ● ○ |
| C# | ● ● ○ ○ ○ | Assembly | ● ● ○ ○ ○ |
| VHDL | ● ● ○ ○ ○ | OOP | ● ● ● ○ ○ |
| Data structure | ● ● ● ● ○ | algorithms | ● ● ● ● ○ |
| SQL | ● ● ○ ○ ○ | Linux | ● ● ● ● ○ |
| Git/Azure | ● ● ● ● ○ | React | ● ● ● ○ ○ |
| Figma | ● ● ● ● ● | Scrum/Agile | ● ● ● ● ○ |

Skills

| | | | |
|-----------------|-----------|------------------------|-----------|
| Deep Learning | ● ● ○ ○ ○ | Reinforcement learning | ● ● ○ ○ ○ |
| ANTLR4 | ● ● ● ● ○ | Networking | ● ● ● ○ ○ |
| Wireshark | ● ● ● ○ ○ | Cisco Packet Tracer | ● ● ● ○ ○ |
| Microcontroller | ● ● ● ○ ○ | Proteus | ● ● ● ● ○ |
| Arduino | ● ● ● ○ ○ | Java | ● ○ ○ ○ ○ |
| Shell Scripting | ● ● ● ○ ○ | | |

Soft Skills

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|-------------------|-----------|----------------------|-----------|
| Teamwork | ● ● ● ● ● | Problem Solving | ● ● ● ● ● |
| Eager to Learn | ● ● ● ● ● | Competitiveness | ● ● ● ● ○ |
| Critical Thinking | ● ● ● ● ● | Interpersonal Skills | ● ● ● ● ○ |
| Coachability | ● ● ● ● ○ | | |

Awards

1. National University Entrance Exam (Konkoor) – Rank 600 / 145,000

Achieved a top 0.5% national ranking in Iran's highly competitive university entrance examination.

2022

2. IUST Distinguished Student Award

Ranked 1st Top 5% Selected as a Distinguished

2026