# Mohammad Amin Karami





#### **EDUCATION**

#### **Sharif University of Technology**

BSc of Computer Engineering Department of Computer Science and Engineering

# GPA: 19.11/20 (3.93/4) September 2019 - Present

GPA: 19.86/20

## Shahid Beheshti high school(Sampad)

Diploma degree - Mathematics/Physics

#### September 2017 - June 2019

## RESEARCH INTERESTS

- Software Engineering and AI
- HCI in Software Engineering
- Software Architecture

- **Empirical Software Engineering**
- Microservices
- Software Systems

## RESEARCH EXPERIENCE

**B.Sc. Thesis** - Sharif University of Technology

October 2024 - Present

## Title: Enhancing User Engagement with Legal Content Using Artificial Intelligence

The ongoing project focuses on transforming the legal content of applications and websites using large language models (LLMs) and enhancing UI/UX with intelligent interfaces. We propose a service that processes this content to create a dynamically designed webpage. This approach allows companies to move away from a centralized UI for legal content. By simply providing the main content, AI-powered components will extract key parts and dynamically design the interface, combining text and images to highlight important sections and boost user engagement.

#### TEACHING ASSISTANT EXPERIENCE

- Web Programming, Instructor: Dr. Omid Jafarinezhad (Fall 2022)
- **Fundamentals of Programming,** Instructor: Dr. Mohamadamin Fazli (Fall 2022)
- Linear Algebra, Instructors: Dr. Maryam Ramezani & Dr. Hamid Reza Rabiee (Spring 2022)
- Advanced Programming, Instructor: Dr. Mohamadamin Fazli (Spring 2021)
- Fundamentals of Programming, Instructor: Dr. Mohamadamin Fazli (Fall 2021)

## WORK EXPERIENCE

## Divar, The Largest Classified Ads Platform in Iran

September 2022 - Present

Software Engineer

- System owner of **Post Storage**, a core service critical to Divar's revenue, supporting over 50 million active users.
- Developed and implemented advanced monitoring and alerts to minimize downtime and rapidly detect system issues.
- Authored and deployed a novel service for auditing message consistency in RabbitMQ, ensuring 100% broker reliability without enabling publisher confirms. This enhancement significantly improved system resilience and efficiency, without affecting message publish time.
- Design a microservice that provides other services with static data, such as categories, mobile and vehicle brand models, etc., using S3 and a package.

Software Engineer

- Served as the system owner for **Adivery**, a startup initiative.
- Led the refactoring and feature implementation, enhancing system efficiency.
- Redesigned and rewrote projects from JavaScript to TypeScript, resulting in a 10x faster API response time.
- Actively participated in the migration of services between data centers, ensuring seamless transition and system integrity.
- Migrated the database from PostgreSQL to MongoDB to handle over 2 million daily events.

## SELECTED COURSES

- Fundamentals of Programming (20/20)
- Discrete Structures (18.5/20)
- Advanced Programming (20/20)
- Data Structures and Algorithms (20/20)
- Compiler Design (20/20)
- Database Design (19.4/20)
- Web Programming (20/20)
- Numerical Computation (20/20)
- Computer Simulation (20/20)

- Operating Systems (19.5/20)
- Linear Algebra (20/20)
- Engineering Probability and Statistics (20/20)
- Artificial Intelligence (19.2/20)
- Design of Algorithms (18.4/20)
- Computer Networks (19.9/20)
- Data and Network Security (19.4/20)
- Software Engineering (19.7/20)

## SELECTED COURSE PROJECTS

Plato App O | Advanced Programming

Built an application using the Java programming language to connect users and allow them to play games with each other.

Laboratory Database O | Database Design

Build and implement an SQL database for the Laboratory system using Python and PostgreSQL.

C-minus Compiler O | Compiler Design

Build and implement a compiler for the C-minus programming language using Python.

Campus OO | Web Programming

Built a web application for student needs such as course selection.

Series of Practical Homeworks O | Computer Networks

Implemented a series of practical homework to become familiar with socket programming and the Internet protocols.

# **HONORS**

• Excelled in the Iran National University Entrance Exam by ranking 38th out of 164,278 aspirants.

#### **SKILLS**

Programming Languages: Python, Go, JavaScript, TypeScript, Java, C

Frameworks and Libraries: Django, DRF, Koa.js, Express.js, React.js, Recoil.js, MUI.js

Databases: SQL and NoSQL Databases such as PostgreSQL, MySQL, Mongo, Redis, ElasticSearch

Technologies: Docker, Docker-compose, Kubernetes, Helm, Git, Linux, Gitlab CI/CD, RabbitMQ, Prometheus, Kafka

#### LANGUAGES

English: TOEFL iBT: Total: 100 (Reading: 26, Listening: 30, Speaking: 23, Writing: 21)

Persian(Farsi): Native Speaker