

# Ali Mehrani

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## Education

### University of Tehran

BSc in Computer Engineering (Software Engineering major)

- School of Electrical and Computer Engineering
- GPA (Last year): 17.03/20 (3.58/4)

Tehran, Iran

Sep 2019 - Jul 2024

### Allameh Tabatabaei High School

Diploma in Mathematics and Physics

- GPA: 18.77/20

Tehran, Iran

Sep 2016 - Jul 2019

## Research Interests

- Distributed Systems
- Cloud Computing
- Distributed AI/ML
- Software Scalability
- Software Performance Analysis
- Big Data

## Research Experience

### University of Tehran's Formal Methods Laboratory

Under the supervision of Prof. F. Ghassemi

- Developed a **tool** to perform the join operation on constraint automata representing components in the **Reo** coordination language.
- Implemented an initial **transition-based heuristic** for the join operation, as proposed in my professor's previous research.
- Integrated additional heuristics into the tool after training and consulting with OpenAI's **GPT-4** (ChatGPT) based on prior research.
- Created new heuristics by combining previously suggested and newly introduced heuristics.
- Conducted a comparative performance analysis of a **total of 8 heuristics**, optimizing the tool's efficiency.

Tehran, Iran

Jun 2024 - Current

## Teaching Experience

### University of Tehran

Teaching Assistant

Database Laboratory, R.Dehqani

Spring 2024

## Awards & Honors

- 2024 **Ranked in the top 7%**, of the 2024 national master's entrance exam for the **Computer Engineering** major, among over **14,000** participants.
- 2024 **Ranked in the top 2%**, of the 2024 national master's entrance exam for the **IT Engineering** major, among over **4,000** participants.

Iran

Iran

## Professional Experience

### University of Tehran's Machine Intelligence and Robotics Laboratory

Front-End Developer

- Under the supervision of prof. **M. Moradi**
- Member of the Front-End development team focusing on an online platform for cognitive games.
- Utilizing technologies including **JavaScript**, **TypeScript**, and **VueJS**.

Tehran, Iran

May 2024 - Sep 2024

### University of Tehran's Institute of Applied Intelligent Systems

Software Engineer

- Member of the development and design team for an e-commerce system using technologies such as **React**, **Node**, **Spring**, and **TailwindCSS**.
- Responsible for identifying and resolving bugs in products, as well as adding new features and implementing system design improvements.
- Gained experience with other technologies, including **Next.js**, **gRPC**, and **microservices**.

Tehran, Iran

Jul 2023 - Mar 2024

### Behpardaz Jahan Ltd.

Internship

- Completed a three-month internship training course.
- Member of the front-end development team for an online cryptocurrency trading platform.
- Utilized technologies including **Python**, **Django**, **JavaScript**, and **Bootstrap**.

Tehran, Iran

Sep 2021 - Dec 2021

## Internship

Mar 2021 - Jun 2021

- Completed an approximately three-month internship training course.
- Learned the basics of software reverse engineering and disassembly.
- Passed 6 stages of technical entrance exams for technical qualification.

## Notable Projects

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### University of Tehran BSc Project

University of Tehran

Under the supervision of Prof. **H. Faili**, I developed an online platform that displays YouTube videos with content localization achieved through subtitle translation using an online AI model for the translation process. Technologies utilized included **Python**, **Django**, **JavaScript**, **TypeScript**, and **React**.

### Bamakkala

University of Tehran's Institute of Applied Intelligent Systems

Bamakkala is an online platform for selling goods developed at the University of Tehran's Institute of Applied Intelligent Systems. I participated in the project as the frontend developer, while also contributing to the backend and design aspects. Technologies used included **React**, **Node.js**, and **Tailwind CSS** for system development.

### Internet Engineering Course projects

University of Tehran

The system developed in this course offered at the University of Tehran is named Baloot. It is an online e-commerce shop that requires user registration to access its features. Users can perform various tasks, including adding to their account balance, purchasing products, rating products, managing their buy list by adding or removing items, posting comments on products, and liking or disliking them. I used technologies including **Maven**, **JUnit**, **Tomcat**, **Bootstrap**, **JDBC**, **JWT**, **OAuth**, **Docker**, **Spring**, and **React** for system development through multiple phases.

### Artificial Intelligence Course Projects

University of Tehran

Implemented seven projects on different artificial intelligence topics, including **search algorithms**, **genetic algorithms**, **minimax**, **Naïve Bayes**, **machine learning**, and **neural networks**, as part of the AI course offered at the University of Tehran.

## Courses & Certificates

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<b>CS50 AI (ongoing)</b>	Harvard University	Apr 2024
<b>CS50 Web (ongoing)</b>	Harvard University	Apr 2024
<b>Back-End Dev Course (Django)</b>	University of Tehran ACM Student Chapter	Sep 2023

## Skills

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<b>Programming</b>	C, C++, Java, Python, HTML, CSS, JavaScript, TypeScript, SQL, Verilog.
<b>Web Development</b>	React, Bootstrap, Tailwind, Node, RDBMS, Spring, Django, Restful API.
<b>Miscellaneous</b>	Git, Docker, Postman, SSH.

## Languages

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<b>English</b>	Professional proficiency
<b>Persian</b>	Native proficiency