Alireza Zarenejad

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Summary

I received my bachelor's degree in computer engineering from the ECE Department of the University of Tehran. A top student at one of the greatest universities in Iran. Responsible researcher and teaching assistant. Proficient in programming and system designing. Seeking to leverage my knowledge about artificial intelligence and Network. With great experience working with honorable professors. Passionate and motivated, with a drive for excellence. I am also working as a software engineer in Mahsan company. My ultimate career goal is to be a world-class researcher in Computer Science and solve real-world problems, and have influential contributions.

Education

Bachelor of Computer Engineering **Sep. 2017 – Sep. 2021**
University of Tehran, Software Engineering *Tehran, Iran*

- **GPA**: 18.76/20 (4/4)
- **Final project**: Multilingual questions and answers retrival using context-based representation (BERT)

Diploma in Physics and Mathematics Discipline **Sep. 2013 – Jun. 2017**
shahid Beheshti High-school (National Organization for Development of Exceptional Talents) *Rey, Tehran, Iran*

- **GPA**: 19.84/20 (4/4)

Selected Courses

- Object Oriented Design Pattern (19.11)
- Parallel Programming (18.2)
- Software Testing (20)
- Research and Technical Presentation (19.6)
- Internet Engineering (19.7)
- Database Design (19.2)
- Computer Networks (20)
- Data Transmission (18.4)
- Systems Analysis and Design (19.2)
- Artificial Intelligence (18)
- Computer Architecture (18.2)
- Algorithm Design (19.7)
- Data Structures (18.2)
- Engineering Probability and Statistics (19.8)
- Discrete Mathematics (19.5)
- Machine Learning (audit)
- Stochastic Processes (audit)
- Natural Language Processing (audit)

Honors and Awards

∗ **Ranked 125** in Iranian University Entrance Exam among more than 250000 participants, admission to the University of Tehran.

∗ **one of the top 10 students** in Computer Engineering at University of Tehran, among the 103 students.

∗ **Received scholarship** from Supporter Foundation of University of Tehran as student with exceptional talent.

∗ **Admission to the University of Tehran and Sharif University of Technology** for the master's degree without the Iranian University Entrance Exam because of the exceptional performance in the undergraduate studies.

Work Experience

Software Engineer **Jun. 2020 – Sep. 2021**
Mahsan Company *Tehran, Iran*

Working as a C++ developer. Some abilities like high-performance and high-quality implementation, unit testing, and agile software development in system-level products are needed. My work is mostly about computer network challenges in Linux operating system. During my career in this company, I get familiar with VoIP. I mainly got familiar with SIP, RTP, and STUN protocols and VOIP and IMS concepts.

Research Experience

Research Assistant **Jan. 2021 – Sep. 2021**
University of Tehran, Software Engineering *Tehran, Iran*

Researcher of Intelligent information systems lab (IIS) at the University of Tehran where researchers focus on developing new methods and enhancing current algorithms used in search engines, recommenders, and other information retrieval systems. Studying question retrieval in community-based question answering services in consultation with prof. Azadeh Shakery.

Teaching Experience

* **Internet Engineering**, Prof. Ehsan Khamespanah
* **Database Systems**, Prof. Azadeh Shakery
* **Computer Networks**, Prof. Ahmad khonsari
* **Computer Networks**, Prof. Naser Yazdani
* **Operating Systems**, Prof. Mehdi Kargahi
* **Programming Languages and Compilers**, Prof. Fatemeh Ghassemi Esfahani
* **Discrete Mathematics**, Prof. Siamak Mohammadi
* **Introduction to Computing Systems and Programming**, Prof. Hadi Moradi

Technical Skills

Programming Languages: C/C++, Java, Kotlin, Python, MATLAB, Verilog, VHDL

Developer Tools: VS Code, Eclipse, Google Cloud Platform, Android Studio, IntelliJ IDEA, PyCharm

Simulation Tools: Modelsim, Altera Quartus, Proteus Design Suite

Network Tools: Wireshark, Tshark

Frameworks: Spring, Django

Web Development: HTML, CSS, JavaScript, React-JS, Docker, Kubernetes

Database: SQL, NoSQL, Redis, JPA, ORM, JDBC

Machine Learning: Tensorflow, Pytorch

Software: Design Pattern, Unit Testing, Project Management Methods

Typesetting: Microsoft Office, LATEX

Operating Systems: Windows, Linux

Projects

Swip Brick Breaker | *C++* **March 2018**
- Implementation of graphical game in which an attendant must remove bricks to get more points.
- Course: Advanced Programming

Poems Classification | *Python* **October 2019**
- Classification of poems of Saadi and Hafez by Naive Bayes algorithm.
- Course: Artificial Intelligence

MIPS Processor Simulation | *Verilog* **January 2019**
- Design and simulation of a MIPS Processor with Verilog including single cycle, multi-cycle, pipeline, and cache.
- Course: Computer Architecture

Loghmeh (Food Delivery) | *Java, Spring, React, HTML, CSS* **April 2020**
- Development and deployment of backend and frontend of online food-delivery.

- Course: Internet Engineering

Electric Circuit Solver | *Python* **April 2020**

- A software for visualizing and solving electrical circuits.
- Course: Electric Circuits

Compiler for ActON based Language | *Java* **April 2019**

- Implementing lexical and syntax analyzer, name analyzer, type analyzer, and code generator.
- Course: Compiler Design and Implementation

ARM Processor | *Verilog* **June 2020**

- Implementation of an ARM processor with SRAM and Caches on FPGA.
- Course: Computer Architecture Lab

Multiplayer Bluetooth mobile game | *Android* **July 2021**

- Developing a real-time multiplayer mobile game like Tank Trouble, over Bluetooth. This project was implemented using Android Studio.
- Course: Real Time Embedded Systems

Multilingual questions and answers retrieval with BERT | *Python* **September 2021**

- Fine tuning BERT model for question and answer retrieval.
- B.Sc. Thesis

Persian Sentiment Analysis | *Python* **November 2021**

- Design models in three different ways(logistic regression, CNN, and BERT) and compare them in sentiment analysis.
- Course: Natural Language Processing

Persian to Tajik transliteration and vice versa | *Python* **December 2021**

- Design a transformer based model with attention.
- Course: Natural Language Processing

Languages

- Persion (native)
- English (fluent)
- Arabic (familiar)

Hobbies and Interests

- sports (football)
- playing chess
- reading book