

# Alireza Eslamikhah

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## EDUCATION

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### **Bachelor of Science in Computer Engineering**

Iran University of Science And Technology

Among the [Top 4 Universities](#) in Iran

***Oct 2020 - Sept 2024***

*Tehran , Iran*

GPA of the Last Two Years: **3.75/4.0**

Overall GPA: **3.6/4.0** (17 /20 in Iranian Scale)

*Thesis: Anomaly Detection in Network Using Machine Learning*

### **Diploma in Mathematics and Physics**

Overall GPA: (4/4) or 19.04/20 in Iranian Scale

***2016-2020***

*Tehran , Iran*

## RESEARCH INTERESTS

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Software Engineering

Programming Languages

Human Computer Interaction

Psychology and Education in CS

Practical Artificial Intelligence

Operating Systems

## RESEARCH EXPERIENCE

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### **Research Assistant at Distributed Systems Laboratory**

Under supervision of **Dr.RezaEntezariMaleki**

***July 2023 – Current***

***IUST University***

- Conducted research on network traffic classification for our paper
- Focusing on concept evolution, handling unbalanced and perturbed data
- Utilizing various active learning and reinforcement learning frameworks to enhance classification accuracy
- Analyzing and interpreting data to support the development of innovative solutions for Quality of Experience challenges

## SKILLS

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***Programming Languages:*** Python , C++ , C , C# , Java , Kotlin , SQL , HTML , CSS

***Web Frameworks:*** ASP.NET, Django

***Tools and Platforms:*** Git, Azure Devops, ANTLR | SQLite , PostgreSQL , MSSQL

***Soft Skills:*** Team working , Communication , Adaptability, Creativity , Piano, Swimming

***Other Skills:*** Cisco Packet Tracer , Wireshark , Android Studio , Linux

## ACADEMICAL EXPERIENCE

### *Teaching Assistance*

*Sep 2022 – Sep 2024*

Operating System

Fall 2024

Instructor: Dr. Reza Entezari Maleki

Compiler Design

Spring 2024

Instructor: Dr. Saeed Parsa

Operating System

Fall 2024

Instructor: Dr. Vahid Azhari

DataBase Design

Spring 2023

Instructor: Dr. Hossein Rahmani

Fundamentals of Programming

Fall 2023

Instructor: Dr. Mehrdad Ashtiani

Computer Architecture

Spring 2024

Instructor: Dr. Amir Mahdi Hosseini Monazzah

Discrete Mathematics

Spring 2024

Instructor: Dr. Vesal Hakami

Data Communication (Head TA)

Spring 2024

Instructor : Dr. Marzieh Sheikhi

## INDUSTRIAL EXPERIENCE

### *Software Engineering Intern (Back-End)*

*2021-2022 Hasin Company*

- Developed back-end systems using ASP.NET Framework and C#
- Implemented database management with Entity Framework
- Collaborated on front-end development using HTML and JavaScript
- Worked on real-time communication features through socket programming

## SELECTED ACADEMIC PROJECTS

### **Vakil Pors**

Backend Developer in VakilPors Project based of ASP.NET framework. VakilPors is a website for finding the suitable lawyer and solving your legal issues, containing features such as Chat Box, Video call, Telegram bot etc. Ranked as the top project in Software Engineering course.

### **Compiler Design and Programming Languages Projects**

Worked extensively with the ANTLR framework to construct abstract syntax trees (AST) and streamline the parsing process. Delved into intermediate language (IL) generation to bridge high-level C# language constructs with machine-level code, also measured several code quality criteria in the final project, ensuring optimized and maintainable code.

### **Computational Intelligence Mini Projects**

Developed and implemented machine learning models and control systems using Python. Created a Multilayer Perceptron (MLP), Genetic Programming algorithms, and Fuzzy Control systems, leveraging NumPy for efficient computations and data processing. Utilizing these techniques to solve complex problems in machine learning and control theory.

### **Operating System Development on XV6**

Enhanced the xv6 operating system by adding custom system calls for generating various threads and handling the zombies in system through the Windows Subsystem for Linux (WSL). Also in other course home works designed and implemented threads and pipelines to enable parallel processing, improving system efficiency and multitasking capabilities. Gaining hands-on experience with low-level OS development.

### **Mathematical Equation Discovery Using Genetic Programming**

Utilized genetic programming to evolve a population of potential mathematical equations, aiming to discover the equation that best fits a given dataset, involving iteratively candidate solutions through selection, crossover, and mutation to achieve optimal results.

### **Samarium**

Samarium Project is an Android app developed with Kotlin to enhance network performance by measuring Quality of Experience (QoE) parameters from an end user's perspective. Providing network operators with insights into service quality, correlating these measurements with Key Performance Indicators (KPIs) from the Radio Access Network (RAN) and core network, even as users move through the network.

### **My Market**

Designed and developed My Market, a web application built using Blazor, a modern ASP.NET framework. This project involved creating a dynamic and interactive user interface, leveraging Blazor's capabilities for efficient, server-side web development.

### **Theory of Language and Automata Project**

Implemented algorithms for Deterministic Finite Automata (DFA), Nondeterministic Finite Automata (NFA), and Turing Machines as part of the course.

### **HONORS, CERTIFICATES & AWARDS**

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<b><i>Ranked within Top 1% in Iranian University Entrance Exam</i></b>	<b><i>July 2020</i></b>
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Mathematics and Physics Major

<b><u>Data Structures</u></b>	<b><i>Jan 2022</i></b>
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Certificate earned from UC San Diego in Coursera

**Algorithmic Toolbox****Nov 2022**

Certificate earned from UC San Diego in Coursera

***Honorary Member of Scientific Association for four Consecutive Terms 2022 – 2024***

Iran University of Science and Technology, Computer Engineering Department

**IELTS Academic****Aug 2024**

Listening 7.5 – Reading 7.5 – Writing 6 – Speaking 6.5

**SELECTED COURSEWORK**

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<i>Compiler Design</i>	<i>A+</i>	<i>Software Engineering</i>	<i>A</i>
<i>Databases</i>	<i>A+</i>	<i>Data Communication</i>	<i>A+</i>
<i>Operating Systems</i>	<i>A+</i>	<i>Advanced Programming</i>	<i>A</i>
<i>Engineering Mathematics</i>	<i>A+</i>	<i>OS Lab</i>	<i>A+</i>
<i>Graph Theory and Algorithms</i>	<i>A+</i>	<i>Methodology of Research</i>	<i>A+</i>
<i>Computer Aided Design</i>	<i>A+</i>	<i>Computer Architecture</i>	<i>A</i>
<i>Data Structures</i>	<i>A</i>	<i>Cybersecurity</i>	<i>A+</i>
<i>System Analysis and Design</i>	<i>A</i>	<i>Differential Equations</i>	<i>A+</i>
<i>Fundamentals of Mobile Systems</i>	<i>A+</i>	<i>Theory of Languages and Automata</i>	<i>A</i>
<i>Entrepreneurship</i>	<i>A+</i>	<i>Computer Architecture Lab</i>	<i>A+</i>
<i>Computer Networks Lab</i>	<i>A+</i>	<i>Mathematics II</i>	<i>A+</i>
<i>Logical Circuits</i>	<i>A</i>	<i>Microprocessor and Assembly Language</i>	<i>A</i>

**REFERENCES**

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Dr. Reza Entezari Maleki : Assistant Professor in Department of Computer Engineering of IUST  
[entezari@iust.ac.ir](mailto:entezari@iust.ac.ir)

Dr. Mehrdad Ashtiani : Assistant Professor in Department of Computer Engineering of IUST  
[m\\_ashtiani@iust.ac.ir](mailto:m_ashtiani@iust.ac.ir)

Dr.M.Monazzah:Assistant Professor in Department of Computer Engineering of IUST  
[monazzah@iust.ac.ir](mailto:monazzah@iust.ac.ir)