Amirhossein **Alizad**

COMPUTER ENGINEERING · STUDENT

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Education

College of Electrical and Computer Engineering, University of Tehran	*Tehran, Iran*
B.Sc. IN COMPUTER ENGINEERING (SOFTWARE ENGINEERING MAJOR)	*SEP 2018 - PRESENT*

- **GPA: 17.03/20 - 3.34/4 (Last Two Years: 18.63/20 - 3.95/4)** Faculty Average: 15.1/20, Major Average: 15.97/20
- **Related Courses:** Data Structures and Algorithms(18.5/20) - Design and Analysis of Algorithms(19.5/20)
  - Computer Architecture(20/20) - Operating Systems(19.5/20) - Artificial Intelligence(19.5/20) - Database Design(19.45/20)
  - Formal Languages and Automata Theory(20/20) - Compilers and Programming Languages(18.75/20) - Software Engineering(19/20)
  - Formal Methods in Software Engineering(17.7/20) - Software Testing(19.84/20) - Internet Engineering(17.1/20)
  - Introduction to Neural Networks and Deep Learning - Network Security

Shahid Beheshty Highschool	*Rey, Tehran, Iran*
DIPLOMA IN MATHEMATICS AND PHYSICS	*SEP 2014 - JULY 2018*

- As a part of National Organization for Development of Exceptional Talents (NODET)

Honors and Awards

Ranked Top 0.15%, in Iranian University Entrance Exam with more than 140,000 participants

Bachelor Scholarship, Awarded a 4-year full scholarship from University of Tehran

Research Interests

- Artificial Intelligence and Machine Learning
- Database Systems
- Computer Vision
- Software Testing
- programming languages and methodology
- Network and System Security
- Speech Recognition and Processing & natural language processing
- Data Mining and Data Retrieval

Research Experience

Hate Speech Detection	*University of Tehran*
	JULY 2022 - PRESENT

- Under supervision of Dr. Azadeh Shakery
- Detecting whether a given text contains a hate speech towards its contact using a predefined data set.
- Implemented using RNN and LSTM.

Teaching Experience

Teaching Assistant	*University of Tehran*
	FEB 2021 - JULY 2021
Formal Languages and Automata Theory	*FEB 2022 - FEB 2023*
Design and Analysis of Algorithms	*FEB 2021 - JULY 2021*
Data Structures and Algorithms	*SEP 2020 - FEB 2021*
Introduction to Computing Systems and Programming	*SEP 2020 - FEB 2021*

Supervising Teaching Assistant	*University of Tehran*
Data Structures and Algorithms	*FEB 2021 - FEB 2022*
Introduction to Computing Systems and Programming	*SEP 2021 - FEB 2022*

Coordinating Teaching Assistant	*University of Tehran*
Software Testing	*SEP 2022 - FEB 2023*

Head Teaching Assistant	*University of Tehran*
Data Structures and Algorithms	*FEB 2022 - FEB 2023*

Work Experience ────────────────────────

Radin Bourse   *Tehran, Iran*
SUMMER INTERNSHIP, SOFTWARE ENGINEER   *JULY 2021 - SEP 2021*
- 8-Weeks Internship.
- I got familiar with different object-oriented design patterns, software development methodologies such as Agile and DevOps, and software testing methodologies. I also designed and implemented a web application. The goal of this application was to assist enrollment process before each semester for students. Implemented in java using Spring frameWork.

Radin Bourse   *Tehran, Iran*
PART TIME, SOFTWARE ENGINNER   *SEP 2021 - PRESENT*
- Designing and developing an ultra-low latency trading platform as a Software Engineer and Back-end Developer using java and spring framework for both the main Matching Engine and API modules.
- Infrastructure specialist in deployment. Using hashicorp nomad as the orchestrator.

Notable Academic Projects ────────────────────

Artificial Intelligence   *University of Tehran*
- **Search Algorithms:** The goal is to find all the marked points in a given map, in the shortest time possible, using search algorithms like IDS, A*, etc. for a snake which grows when it reaches each marked point on the map.
- **Genetic Algorithm:** The goal is to find a set of logical gates in an specific order, to generate all the desired outputs with a given input set to this set of gates using genetic algorithms.
- **Text Processing using Bayesian Networks:** The goal is to find a set of logical gates in an specific order, to generate all the desired outputs with a given input set to this set of gates using genetic algorithms.
- **Price Estimation using Regression:** Machine Learning project to predict and find the range of the price of a house with a set of given qualities, using SKLearn and seaborn libraries.
- **Image Classification with Neural Network:** Training neural networks using different activation functions and other different features using keras library to detect whether a picture of a lung given to the network, has pneumonia, covid-19 or is normal.

Operating System   *University of Tehran*
- Customizing xv6 kernel with some added features for CPU scheduling, memory management, and synchronization
- Projects of this course consist of subjects like Socket Programming or a combination of AI and MultiThreading

Internet Engineering   *University of Tehran*
- Developing web application for Movie Database called IEMDB to watch, rate, like and comment on a movie.
- **BackEnd:** Spring Framework with REST API - **FrontEnd:** JavaScript (Reactjs) - **DB:** MYSQL - **Deployment:** Docker, Kubernetes

Software Testing   *University of Tehran*
- **Pet Clinic:** Testing a Web Application for a pet clining. writing coverage tests, movkMVC tests, assertion tests and cucumber tests for this web application was the goal of this project.

Summer Internship Project   *Radin Bourse*
- **Enroll Assist Application:** Web Application to simplify the enrollment process before each semester for students alongside writing movkMVC tests, assertion tests and cucumber tests for this web application.

Skills ────────────────────────────────

Programming	Intermediate: java, C++, C, python
	Beginner: SQL, Antlr, HTML, VerilogHDL, Ansible
	Familiar: Assembly, Go, PHP, R
Technology	Git, Docker, Jupyter Notebook, Maven
Web Development	Spring, React, HTML, CSS
Databases	MySQL, PostgreSQL, Hazelcast
Python Libraries	Keras, seaborn, matlotlib, pandas, numpy, sklearn
Software Engineering	Proficient in object-oriented design patterns, software development methodologies, and software testing

Languages ────────────────────────────

Persian	Native
English	Professional working proficiency