

# Danial Chekani



Tehran, Iran



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## LANGUAGES

### Persian

Native Language

### English

Professional Working Proficiency

## RESEARCH INTERESTS

- Machine Learning
- Natural Language Processing
- Bioinformatics
- Data Mining
- Computer Vision
- Security
- Graph Theory

## TEST SCORES

### IELTS Academic Test

21 Aug 2023

- Band Score : **8.5**

Listening: 9

Reading: 9

Writing: 7.5

Speaking: 7.5

### GRE General Test

24 Oct 2023

- Overall Score : **320**

Quantitative: 170

Verbal: 150

## EDUCATION

### Bachelor of Science (B.S.) In Computer Engineering

K.N.Toosi University of Technology, Tehran, Iran

2019 - Expected Graduation Jan 2024

**GPA: 3.82/4 – 17.82/20**

### RESEARCH & TEACHING ASSISTANT

- Fall 2023, Research Assistant,

Instructor: Dr. Farnaz Sheikhi - [f.sheikhi@kntu.ac.ir](mailto:f.sheikhi@kntu.ac.ir)

Collaborating on research to detect depression through machine learning analysis of social media using eRisk dataset

- Fall 2022, Teacher Assistant, *Course*: Operating Systems

Instructor: Dr. Hamed Khanmirza - [h.khanmirza@kntu.ac.ir](mailto:h.khanmirza@kntu.ac.ir)

Prepared and graded assignments and projects, and helped students with course content

- Fall 2022, Teacher Assistant, *Course*: Hardware Software Codesign

Instructor: Dr. Hoda Roodaki - [hroodaki@kntu.ac.ir](mailto:hroodaki@kntu.ac.ir)

Hosted classes, prepared and graded assignments and projects, and helped students with course content using SystemC

- Fall 2021, Teacher Assistant, *Course*: Advanced Programming

Instructor: Dr. Mehdi Esnaashari - [esnaashari@kntu.ac.ir](mailto:esnaashari@kntu.ac.ir)

Hosted classes, prepared and graded assignments, and helped students with course content using Java

### RELEVANT COURSES

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|--|--|
| Advanced Programming: 20/20                        | Database: 20/20                                    |
| Operating Systems: 20/20                           | Software Engineering: 20/20                        |
| System Analysis & Design: 20/20                    | Algorithm Design: 20/20                            |
| Foundations of Speech & Language Processing: 19/20 | Data Mining: 18.75/20                              |
|  | Artificial Intelligence & Expert Systems: 18.75/20 |

### ACADEMIC ACHIEVEMENTS

- Secured admission to one of Iran's premier industrial universities, ranking among the top 1% of the candidates.
- Attained a distinguished standing within the university, achieving placement in the top 15% of a cohort of 95 individuals

## ACADEMIC PROJECTS & RESEARCH

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### ETH Price Prediction Using Social Sentiments

*Supervisor: Dr. Masoud Dehyadegari*

Developed a machine learning project as my Bachelor's thesis project to predict Ethereum price value by amalgamating sentiment analysis data from Twitter and Reddit, processed using the Vader library, combined with Ethereum hourly candles to create a dataset. Utilized TensorFlow to build and train a predictive model based on the combined dataset, aiming to correlate sentiment trends with Ethereum price movements.

### Heuristic Methods of Solving Traveling Salesman Problem

*Supervisor: Dr. Farnaz Sheikhi*

As part of a team, we applied varied heuristic techniques to solve the TSP problem, testing them on real-world data to assess execution time.

### CoDesign Implementaion of TSP Using Ant Colony

Designed a Hardware-Software Co-design framework using Python for software and SystemC for hardware, communicating via sockets. Hardware, developed in C++ and SystemC, manages complex computations, while Python software enhances functionality and user accessibility.

## SKILLS

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- Programming Languages: Java, C#, Python, C, Assembly, VHDL, Typescript/JS
- Machine Learning Framework: TensorFlow, Keras, Scikit -learn
- Responsive Web Application Development
- Front-End Programming & UI Design: HTML5, CSS3, ReactJS - Semantic UI, MUI, & Bootstrap libraries
- Back-End Programming: Asp.net Core, C#
- Source and Version Control: Git, GitHub
- Multi-Layer Architecture: MVC, CQRS & Mediator
- SQL and database providers such as SQL Server, PostgreSQL

## PROFESSIONAL DEVELOPMENT COURSES

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- Python Programming
- Neural Networks and Deep Learning
- ASP.NET Framework MVC
- Supervised Machine Learning: Regression and Classification
- Sequence Models and Deep Learning
- Full-Stack Web Application with ReactJS, ASP.NET Core & TS

## WORK EXPERIENCE

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### **Full-Stack Developer**

May 2022 – Present **Freelance**

Created E-Commerce and social media websites from scratch using ReactJS and Asp.net Core as front-end and back-end frameworks respectively and Used Mediator and CQRS design patterns to achieve a clean 5-layered architecture

### **Windows Application Developer**

Dec 2021 – Mar 2022 **Freelance**

Created a GUI interface for communicating to a Matlab project using JavaFX. Built multiple Windows applications using C# windows forms with access to SQL database..