





# Danial Chekani

 Tehran, Iran

 +98 939 1165361

 danialchekani2000@gmail.com

 <https://github.com/danial-ch>

## LANGUAGES

### Persian

Native Language

### English

Professional Working Proficiency

## RESEARCH INTERESTS

- Machine Learning
- Graph Theory
- Sustainable Mobility
- Data Mining
- Public Transportation
- Software Design

## 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

Sep 2019 – Feb 2024

**GPA: 3.80/4 – 17.81/20**

### RESEARCH & TEACHING ASSISTANT

- Fall 2023, Research Assistant,  
*Research:* Depression Detection  
Collaborating on research to detect depression through machine learning analysis of social media using eRisk dataset
- Spring 2023, Teacher Assistant,  
*Course:* Operating Systems  
Prepared and graded assignments and projects, and helped students with course content
- Spring 2023, Teacher Assistant,  
*Course:* Hardware Software Codesign  
Hosted classes, prepared and graded assignments and projects, and helped students with course content using SystemC
- Spring 2022, Teacher Assistant,  
*Course:* Advanced Programming  
Hosted classes, prepared and graded assignments, and helped students with course content using Java

### RELEVANT COURSES

- Advanced Programming: 20/20
- Operating Systems: 20/20
- System Analysis & Design: 20/20
- Foundations of Speech & Language Processing: 19/20
- Database: 20/20
- Software Engineering: 20/20
- Algorithm Design: 20/20
- 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

## RESEARCH EXPERIENCE

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### Depression Detection on eRisk 2017 Using LSTM Models

Utilized methods such as LSTM, GRU, and their Bi-Directional and hybrid versions to predict depression on eRisk 2017 users. We extracted several features from a collection of 478,000 Reddit posts and 887 users to create the dataset and evaluated and compared different models' performance. Our methods and models reached superior results compared to previous works

### ETH Price Prediction Using Social Sentiments

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

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.

## 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
- ASP.NET Framework MVC
- Supervised Machine Learning: Regression and Classification
- Full-Stack Web Application with ReactJS, ASP.NET Core & TS

## PRACTICAL EXPERIENCE

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### Full-Stack Development

May 2022 – Jun 2023

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 Development

Dec 2021 – Mar 2022

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.