Laya Fakher
Computer Engineer

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 https://layafakher.netlify.app/

I'm Laya, really curious about daat science and always excited to learn. Teaching is my thing too – I love sharing what I know to help others. This mix of techie curiosity and a passion for teaching drives me toward a future full of new ideas.

EDUCATION

2019 - 2023	**Bachelor's in Computer Engineering**, K. N. Toosi University of Technology, Tehran, Iran. Computer Science Ranking : 601 - 800 in Times Higher Education (THE), 2023. Thesis title : Bitcoin price prediction using news sentiment analysis. Supervisor : Dr. Masoud Dehyadegari Cumulative GPA : 3.68/4 or (17.68/20.0) - Last 2 years GPA : 3.85/4 or (18.8/20.0)
2018 - 2019	**High school diploma in mathematics and physics**, Shahid Bahonar Leading High School (GPA : 19.43/20)

INTERESTS

General	Machine Learning, Deep Learning, Data Mining, Natural Language Processing, Speech Processing, Garphs, Computer networks, Statistical Analysis, Computational Biology and Bioinformatics, Software Engineering, Blockchain, Computer Vision.
Specific	Text Sentiment Analysis, human-robot interaction, Speech Recognition, Mental Health Analysis, Community Detection in Graphs, Biological networks, Object Detection.

SKILLS

Languages	**Java** , **Python** , C/C++, C#, Matlab , VHDL , Javascript , jQuery , HTML5, CSS , PHP.
Frameworks & Libraries	TensorFlow , Keras , Scikit-learn , NLTK , Textblob , VADER , Transformers , Pandas , React JS , Node JS , Express JS , Bootstrap.
Architectural & design Patterns	MVC , MVP , Observer , Singleton.
Data base	phpMyAdmin, MySQL, PostgreSQL.
Tools	Cisco Packet Tracer , Wireshark , IntelliJ Idea, Eclipse , Visual Studio 2019, Visual Studio code , WebStorm , PhpStorm , Xilinx ISE , Proteus 8 Professional, git.
Operating systems	Windows , Linux , Android.
Modelization	UML , BPMN , Use Case Diagram , Sequence Diagram.
Office automation	LaTeX, Pack Office(Word, Excel, PowerPoint).

LANGUAGES

Persian	Native
English	Advanced - IELTS will be taken on SEP,17,2023

TEACHING AND MENTORING

Spring 2023	Teaching Assistant , Hardware/Software Codesign , SYSTEMC, Instructor : Dr. Hoda Roodaki › Grading tests, projects and homework. › Helping students who need extra support to complete tasks. › Teaching small groups who need additional help or guidance. SystemC visual Studio 2019
Fall 2022	Teaching Assistant , Computer Networks , FUNDAMENTALS, Instructor : Dr. Fateme Rezaei › Grading projects and homework. › Reviewing material taught in class with individual students with learning challenges. › Explaining concepts and offering additional support to students who needed it. The Physical Layer The Data Link Layer Python MATLAB Signal Processing

Spring 2020 and Spring 2022	Teaching Assistant, ADVANCED PROGRAMMING, Instructors : Dr. Mehdi Esnaashari ,Mr. Mehdi Zamanian › Grading tests, projects and homework. › Project Declaration. › Preparing Presentations. › Supervising group activities. Java · Javafx · Object-Oriented Programming
Fall 2020 and Fall 2022	Teaching Assistant, ADVANCED PROGRAMMING, Instructor : Mr. Mehdi Zamanian › Grading assignments, projects and homework. › Supervising group activities. › Explaining concepts and offering additional support to students who needed it. Java · Javafx · Object-Oriented Programming
Fall 2023	Teaching Assistant , Computer Networks , ADVANCED, Instructor : Dr. Fateme Rezaei › Grading projects and homework. › Helping students who need extra support to complete tasks. › Explaining concepts to students who needed it. Application Layer · Transport Layer · Network Layer

🖥 RESEARCHES AND PROJECTS

DEPRESSION DETECTION AUGUST 2023 - PRESENT

currently in progress
depression detection on social media using deep learning and machine learning techniques on eRisk datasets.

SVM · LSTM · GRU · HDLTex · Deep Learning · Machine Learning · Python

BITCOIN PRICE PREDICTION JUNE 2023 - SEPTEMBER 2023

 github.com/layafakher/Bitcoin-Price-Prediction-Using-News-Sentiment-Analysis   Google Colab
Bitcoin Price Prediction using News Sentiment Analysis.

LSTM · Textblob · Deep Learning · Python

PITCH DETECTION FEBRUARY 2023 - MARCH 2023

 github.com/layafakher/pitch-detection
Detecting and plotting pitch contour of a given audio file using AMDF, Autocorrelation and Cepstrum methods.

MATLAB

TSP METAHEURISTICS MAY 2023 - JUNE 2023

 github.com/layafakher/TSP-Metaheuristics
Solving the TSP problem using Bat Algorithm and Red deer Algorithm on a dataset containing 4663 location's coordinates in Canada.

Python

SOLVE TSP USING ANT COLONY OPTIMIZATION HARDWARE/SOFTWARE CODESIGN JUNE 2022 - JULY 2022

 github.com/layafakher/TSP-AntColonyOptimization
Solving tsp problem using Ant-Colony optimization with SystemC as a server and Python as a client.

Tsp · Ant Colony Optimization · Python · SystemC

ANDROID MUSIC PLAYER FEBRUARY 2021 - MARCH 2021

 github.com/layafakher/MusicPlayer-Androi
Android Application music player using java in android

Java · Android Programming · Android Studio

💼 WORKING EXPERIENCE

February 2020 Present	Freelance Programming, WEB DEVELOPMENT, Software Development › Developing Web Applications. › Working with various frameworks such as React JS and Express JS. › Android Programming in Android Studio. SQL Server · Android · HTML · CSS · Javascript · React JS · php · phpMyAdmin

🎓 HONORS AND AWARDS

2023	Ranked among the top 20% among the graduated students of Computer Engineering Department, K. N. Toosi University of Technology, Iran, 2022.
2019-2023	Received a full four-year scholarship for the entire duration of my undergraduate studies, including complete tuition waiver.
2019	Ranked among the top 1% among approximately 160,000 participants in the University Entrance Exam for bachelor's degree, Iran.

🎓 RELEVANT COURSES

Speech and Natural Language Processing :	20/20
Artificial Intelligence and Expert Systems :	19.25/20
Data Mining :	20/20
Graph Theory and Algorithms :	20/20
Data Base :	20/20
Software Engineering :	20/20
Computer Networks :	18.2/20

🎓 CERTIFICATIONS

2023	Sequence Models, Coursera
2023	Neural Networks and Deep Learning, Coursera.
2023	Supervised Machine Learning : Regression and Classification, Coursera.
2023	Improving Deep Neural Networks : Hyperparameter Tuning, Regularization and Optimization, Coursera.
2022	Java Programming : Solving Problems with Software, Coursera.
2022	Front-End Web Development with React, Coursera.
2022	Programming for Everybody (Getting Started with Python), Coursera.
2022	HTML, CSS, and Javascript for Web Developers, Coursera.

❝ REFERENCES

Dr. Fatemeh Rezaei
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