

Laya Fakher

Computer Engineer

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Personal Webpage

I'm Laya, really curious about computer 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 (Cumulative GPA : 17.68/20.0 - Last 60 Credits GPA : 18.8/20.0)
- 2018 - 2019 **High school diploma in mathematics and physics,**
Shahid Bahonar Leading High School (GPA : 19.43/20)

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
Computer Networks : 18.2/20

INTERESTS

GENERAL : Machine Learning, Graphs, Natural Language Processing, Speech Processing, Clustering, Deep Learning.
SPECIFIC : Text or Token Classification and Sentiment Analysis, Speech Recognition, Community Detection in Graphs .

TEACHING AND MENTORING

- January 2023
June 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
- September 2022
January 2023 **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
- September 2020
June 2022 **Teaching Assistant, ADVANCED PROGRAMMING, Instructors : Dr. Mehdi Esnaashari , Mehdi Zamanian**
 > Grading tests, projects and homework
 > Project Declaration
 > Preparing Presentations
 > Tracking student attendance and class schedules
 > Supervising group activities
 > Attending training classes and conferences
 > Review material taught in class with individual students with learning challenges
 > Explaining concepts and offering additional support to students who needed it.
 Java Javafx Object-Oriented Programming
- September 2023
Present **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

SKILLS

Programming languages	Java (JEE) ,Python , C/C++ , Matlab , VHDL , Javascript , jQuery , HTML5 , PHP .
Frameworks	React JS , Bootstrap , Express JS.
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).

RESEARCHES AND PROJECTS

DEPRESSION DETECTION

AUGUST 2023 - PRESENT

currently in progress

depression detection from social network 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 and Autocorrelation and Cepstrum methods

[MATLAB](#)

NGRAM

APRIL 2023 - MAY 2023

github.com/layafakher/Ngram

Creating a random string of words of the corpus, whose length is less than 5 words, and then calculating the probability of occurrence of this string of words assuming the current mini corpus and Bigram approximation.

[Python](#)

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](#)

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](#)

LANGUAGES

Persian Native

English IELTS will be taken on SEP,17,2023

HONORS AND AWARDS

2023	Ranked among the top 30% 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.

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

Fatemeh Rezaei

Assistant Professor, COMPUTER ENGINEERING DEPARTMENT, K. N. TOOSI UNIVERSITY OF TECHNOLOGY

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