

# Mojtaba Alehosseini

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## EDUCATION

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2017 - 2022      B.Sc. Computer Science at **Yazd University/Iran**

Selected Courses: (GPA: 17/20)

Advanced Programming (Grade: 19), Theory of Computation (Grade: 18.25), Operating Systems (Grade: 18.5), Artificial intelligence (Grade: 17), Computer Networks (Grade: 18.1), Computer Simulation (Grade: 17.75), General Mathematics III (Grade: 19), Linear Optimization (Grade: 17.5), Linear Algebra (Grade: 14.25), Data Mining (Grade: 15.75), Databases (Grade: 16.25), Algorithms (Grade: 14.5), Data Structures (Grade: 15), Complex Analysis (Grade: 16), Differential Equations (Grade: 16), General Physics I (Grade: 19.25)

## INTERESTS

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Machine learning, Deep learning, Big data, Data Analysis, Blockchain, Web3, and Distributed Systems.

## SELECTED PROJECTS


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**Identification of pneumonia based on deep learning approach.** 

Implemented convolutional neural network, using different architectures like VGG, ResNet, NASnet.

**Implemented and investigated performance of classification algorithms such as decision tree, K-nearest neighbors, logistic regression and random forest to:**

**Predict whether a person requires Covid test using these symptoms.** 

**Classify patients with liver problems in a clinical data set.** 


Experimented and identified best features for different algorithms.

Performed data normalization using different methods (Min-Max, z-score).


Performed N-fold cross-validation on the data set.


Compared precision, recall and F-score of the algorithms.

**Developed a System Modeling and Simulation for:**

**Newspaper Seller's Problem using VBA in Office Excel.** 

**Replacing Bearings in a Milling Machine using Python in Jupyter notebook.** 


**The Dump Truck Problem using VBA in Office Excel.** 


**Implemented the Genetic Algorithm and particle swarm optimization** 

in Matlab and Python to the search of the optimum solution of multiple complex functions.

**Advanced implementation of regression modelling techniques** like lasso regression in Python. 

**Implemented the Topic analysis technique in natural language processing.** 


**Implementation of CNN using Keras for classification of MNIST dataset.** 

**Implementation of rgb2gray to convert RGB image to grayscale without using OpenCV.** 


**Translation of motion into object (motion of a mouse depicting a number) using Python.**

**Implementing a chat box interface to the networking connection of two computers.** 


**Strassen's Matrix Multiplication Algorithm with C++.** 

**Deriving data structure to eliminate vertices in a tree structure.** 

**Optimally threaded execution of an OS-like program.**

**Developed a probability calculator function for a coin tossing game.** 

**Derived and implemented a gym registration software** using SQL as the database and C# in Visual Studio.

**Developed a restaurant software with C++** to scan and analyze daily transaction data files. 

## SKILLS

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<b>Industry Knowledge</b>	Machine Learning, Operating Systems, Computer hardware expertise
<b>Programming Languages</b>	C++, C, Python, MATLAB
<b>General</b>	L <sup>A</sup> T <sub>E</sub> X, Microsoft Excel, Microsoft office
<b>Soft Skills</b>	Teamworking, Teaching, Self-Learning, Problem-Solving, Deep work.

## WORK EXPERIENCE

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**System Administrator, Setare Talae Co., Delijan, Iran** 2021 - 2022

As an IT member of Setare Talae Co. I was responsible for supporting, troubleshooting, and maintaining computer servers and networks.

**I was the co-founder of Pinfopedia, which is a startup company in the field of IT and commercial data sorting and holograming.**

**Network administrator assistant at Yazd University, Yazd, Iran** 2018 - 2019

**Riggosaurus mining** (a mining project which used graphical data processing in sequences with the aim of selecting the optimal cryptocurrency to mine at a given time interval).

## TEACHING ASSISTANT EXPERIENCE

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**Advanced Programming** Yazd University, Fall 2020

**Introduction to Programming** Yazd University, Fall 2019

## OTHER ACTIVITIES

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**Secretary of Scientific Computer Science Association of Yazd University for 2 years.**

Our association was named the 2nd best scientific association in Yazd University. I held and managed lots of contests and competitions.

**The scientific editor of DigiaTech** (which was a journal published by the scientific association of computer sciences of Yazd University). I published a review article on machine learning methods and another one on data mining.

**The Translator of SimPy library manual (from English to Persian).** 

## HONORS AND AWARDS

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**Ranked in the top 2% of nearly 500,000 participants in the nationwide university entrance exam, mathematics and physics section, 2017.**

**Ranked the 3rd highest scoring student of computer sciences of Yazd University, 2021**

## REFERENCES

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**Dr. Jamal Zarepour**

Assistant Professor of Computer Science Department, Yazd University, Yazd, Iran

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