# Maryam Saeidmehr

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# EDUCATION

#### Isfahan University of Technology

B.Sc. in Computer Engineering; GPA: 17.96/20 (3.84/4)

Isfahan, Iran Sept. 2017 - Feb. 2022

# National Organization for Development of Exceptional Talents

Diploma in Mathematics and Physics; GPA: 19.96/20 (4/4)

Isfahan, Iran

Sept. 2013 - June 2017

# Awards & Achievements

Ranked 10th Among More Than 80 Undergraduate Students in Computer Engineering Department, Isfahan University of Technology

Dec. 2017 - Feb. 2022

Ranked within the top 1% in 'National Entrance Exam for B.Sc Studies' in Iran Among More Than 148,000 Students in the Field of Mathematics and Physics

Aug. 2017

Admitted to NODET, National Organization for Development of Exceptional Talents

Aug. 2013

#### Research Interests

Machine learning, Deep learning, Computer vision

#### Research Experience

# Isfahan University of Technology

Isfahan, Iran

Supervisor: Prof. Shadrokh Samavi

Oct. 2020 - Sept. 2021

 Proposed a deep convolutional neural network to efficiently detect COVID-19 from CT images using the transfer learning approach performing with a high degree of accuracy.

### TEACHING EXPERIENCE

# Isfahan University of Technology

Isfahan, Iran

Teaching Assistant for the course Compiler

Feb. 2022 - June 2022

• Assisted in creating course materials and procedures, grading, and conducting instructional workshops

#### Isfahan University of Technology

Isfahan, Iran

Teaching Assistant for the course Databases I

Feb. 2021 - June 2021

Assisted in creating course materials and procedures, grading and conducting Q&A sessions

#### Work Experience

# Rasad Sarmayeh Company

Isfahan, Iran

Data Analyst

June 2023 - Oct. 2023

- Analyzed and interpreted large sets of marketing and trading data to inform business decisions.
- Cleaned and prepared data for analysis, ensuring accuracy and reliability.
- Designed and implemented SSIS packages to automatically extract, transform, and load data for efficient interpretation and analysis.
- Created visualizations and reports to effectively communicate data insights to stakeholders.

Freelance Isfahan, Iran Full Stack Developer Jul. 2023 - Aug. 2023

- Developed a web application that integrates education and gamification, combining homework assignment management with a real-time fighting game to motivate students.
- Utilized Django Rest Framework (DRF), Channels, and Celery to build the backend infrastructure of the web application.

- Implemented React.js and Material-UI (MUI) for the front-end development, ensuring a responsive and user-friendly interface.
- Implemented real-time features using WebSockets to enable live interaction between students during the fighting game.

Zamin Company Isfahan, Iran

Software Engineer Intern

 $June\ 2021\ -\ Sept.\ 2021$ 

- Assisted in building beautiful user interface for clients without compromising functionality for aesthetics.
- Learned front-end object-oriented programming to develop client server systems.
- Wrote unit tests in Jest to ensure code was tested and 100% bug free.

# Notable Courses

Fundamentals of Machine Learning (17.5/20)

Artificial Intelligence (18.34/20)

Applied Linear Algebra (18.7/20)

Signals and Systems Analysis (17.3/20)

Multimedia Systems (17.1/20)

Compiler (20/20)

Databases I (19/20)

Engineering Mathematics (17.5/20)

Differential Equation (18/20)

Discrete Structures (19.4/20)

Data Structures (20/20)

General Mathematics I (19/20) General Mathematics II (19.5/20)

Game Theory (18.2/20)

# Online Notable Courses

• Neural Networks and Deep Learning, Coursera

• Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization, Coursera

- Structuring Machine Learning Projects, Coursera
- Convolutional Neural Networks, Coursera
- Sequence Models, Coursera
- Machine Learning A-Z<sup>™</sup>: Hands-On Python & R In Data Science, Udemy

# SKILLS

**Programming Languages:** Proficient in C, C++, Python and Familiar with MATLAB, R

Frameworks & Toolkits: Tensorflow, Keras, NumPy, Scikit-Learn, Pandas, OpenCV, SSIS, Git

Web: HTML5, CSS3, Javascript, JQuery, ReactJS, Bootstrap, Django

Operating System: Linux (Ubuntu, Kali), Windows

Typesetting: Latex, Microsoft Office

#### Projects

# ${\bf COVID\text{-}19~Detector} \mid \textit{GitHub} \mid \textit{WebApp}$

Sept. 2021 - Aug. 2022

- Implemented a deep convolutional neural network to detect Covid-19 from CT images using Keras and Tensorflow.
- Performed data pre-processing and augmentation using Python.
- Evaluated model performance using metrics such as accuracy, sensitivity, and specificity.
- Deployed model as a web application by using Django REST framework and ReactJS.

# Image Watermarking in DCT Domain | GitHub

Dec. 2019 - Nov. 2019

- Designed and implement an adaptive blind image watermarking algorithm concerning edge pixel concentration, improving imperceptibility by about 24% compared to non-adaptive methods.
- Reviewed NC results of both adaptive and non-adaptive methods against JPEG attack.

# Digit Recognition | GitHub

May 2023 - May 2023

- Designed and implemented a robust digit recognizer leveraging Tesseract, a powerful open-source OCR engine, to accurately identify English digits from images.
- Developed a visually appealing graphical user interface (GUI) that seamlessly integrates with the digit recognition system, providing a user-friendly and intuitive experience.