

# Maryam Saeidmehr

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## EDUCATION

### Isfahan University of Technology

Isfahan, Iran

*B.Sc. in Computer Engineering; CGPA: 17.96/20 (3.84/4), MGPA: 18.58/20 (4/4) Sept. 2017 – Feb. 2022*

### National Organization for Development of Exceptional Talents

Isfahan, Iran

*Diploma in Mathematics and Physics; CGPA: 19.96/20 (4/4) Sept. 2013 – June 2017*

## AWARDS & ACHIEVEMENTS

**Ranked 9th** Among More Than 90 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, Medical image analysis

## 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

### 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

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- Convolutional Neural Networks, Coursera
- Neural Networks and Deep Learning, Coursera
- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization, Coursera
- Machine Learning A-Z™: Hands-On Python & R In Data Science, Udemy
- Supervised Machine Learning: Regression and Classification, Coursera

## SKILLS

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

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

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

**Operating System:** Linux (Ubuntu, Kali), Windows

**Typesetting:** Latex, Microsoft Office

## PROJECTS

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**COVID-19 Detector** | [GitHub](#) | [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.

## REFERENCES

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**Prof. Shadrokh Samavi**

*Professor, Isfahan University of Technology*

- Email: samavi96@cc.iut.ac.ir

**Dr. Nasser Ghadiri**

*Associate Professor, Isfahan University of Technology*

- Email: nghadiri@iut.ac.ir

**Dr. Zeinab Zali**

*Assistant Professor, Isfahan University of Technology*

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