Sina Emami

Tehran Province, Iran

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Education

B.S. in Computer Engineering
Tehran, Iran

Azad University, Central Tehran Branch(IAUCTB) *Sep. 2017 - Jul. 2021*

- 150 credits program with **GPA** of **17.74/20.0 (3.73/4.0)**. **GPA** of the last two years is **(3.88/4.0).**

High School Diploma of Mathematics and Physics
Tehran, Iran

National Organization for Development of Exceptional Talents (NODET) *Sep. 2013 - Jul. 2017*

- GPA: **19.0/20.0**

Honors & Awards

2021 **Top student of graduating class,** GPA ranked within the **top 3%** among the graduating

2017 **National Entrance Exam,** Ranked within the **top 5%** of the Iranian University Entrance Exam for Bachelor degree

Research Interests

- Deep Learning
- Machine Learning
- Computer vision
- Medical image processing
- Computational Finance
- Bioinformatics

Teaching Experience

Nurafarin Company(NAICO)
Tehran, Iran

Teacher *Apr. 2022 - Present*

- Teaching some advance concepts of python which are essential for algorithmic trading. Some of my lectures can be found on my GitHub.
- Taught the basic and fundamental concepts of python. Some of my lectures can be found on my GitHub.

Azad University, Central Tehran Branch(IAUCTB)
Tehran, Iran

Teacher Assistant *Jan. 2019 - Jun. 2019*

- TA of **System Analysis and Design** course, Under Supervision of **Dr. Ali Harounabadi**
- Responsibilities: Head Teaching Assistant, Teacher in Problem-Solving classes.

Working Experience

Nurafarin Company(NAICO)
Tehran, Iran

Data scientist & Backend developer(Node.js & Django) *Feb. 2021 - Present*

- Working on services to predict Cryptocurrency prices and produce signals by using deep learning and machine learning algorithms such as **RNN, CNN, GAN**, etc.
- Train a model to analyze the news to predict whether the candle will be green or red using **NLP**.
- Developed a bot to automatically copy traders' trade for all their followers in their accounts with API in Binance exchange in less than a second using **Python, Flask, and SQLite**. Wrote unit-test for it with **89% code coverage**.
- Developed the back-end side of a service that receives signals and tracks them to fetch specific features in each signal duration to analyze the cryptocurrency market better using **Node.js, GraphQL, and MongoDB**.
- Developed the back-end side of a service that fetch and store all the candles related to Binance exchange using **Node.js and GraphQL**.

AIMedic
Tehran, Iran

Medical image processing and analysis *Nov. 2020 - May. 2021*

- Trained a machine to segment and specify the infected part of a lung from the CT-Scan in Covid-19 cases. The Overall Patient-Level Test reached **92% for the F1-Score**.
- Built a machine to classify Covid-19 and non-Covid cases from lung CT-Scan. The Overall Patient-Level Test reached **94% for the F1-Score**. Also helped in labeling data.

Amerandish Hooshmand
Tehran, Iran

Internship *Aug. 2020 - Nov. 2020*

- Contributed to developing the web application of an artificial intelligence video and photo analyzer named Binayar.

Remis
Tehran, Iran

Help Desk Technician & Storage and Server Administrator *Aug. 2018 - May. 2019*

- Installed and configured Cisco routers, switches and HP servers.

Selected Projects

Covid-19 lung CT Scan segmentation

This model is trained to segment those parts which are infected by Covid-19 in CT Scan

- The dataset from Kaggle page is used.
- **Histogram Equalization** is used to make infection parts more visible and augmentation is used to create more data for train better.
- The machine has been trained with **UNet** model.
- The loss function is the combination of **weighted dice loss and surface loss**
- The testset got the **93% for AUC**, **0.93% sensitivity**, and **0.99% specificity**.

Stock Candle prediction using CNN

Predict stock candle(whether it is a green or red candle) using 2D and 3D CNN

- It is my implementation of the idea of an article. The GitHub page for this article is available here.
- CNN is used to classify whether the candle will be green or red using a diverse set of variables.

ISIC-2019 Melanoma Classification

Classify dermoscopic images among nine different diagnostic categories

- The goal for ISIC 2019 is classify dermoscopic images among nine different diagnostic categories
- I had tried different regularization techniques to overcome the overfitting problem

Skills

Programming Languages	Python, JavaScript, Matlab, Latex, CSS
ML/AI Knowledge	Recurrent Neural Networks, Convolutional Neural Networks, Generative Adversarial Networks, Transformers
ML/AI Packages	Tensorflow, Keras, Scikit-learn, Numpy, Pandas, Matplotlib
Back-end	Node.js, Django, FastAPI, REST API, GraphQL
Database	MongoDB, MySQL, Redis, SQLite
Other Technologies	Git, Linux
Interpersonal Skills	Teamworking, Teaching, Self-Learning, Problem-Solving, Critical Thinking

Courses & Certifications

Online Courses

Smart Contracts: University at Buffalo by Coursera
AI for Medical Diagnosis: Deeplearning.ai by Coursera
Machine Learning: Stanford University online by Coursera
Deep Learning Specialization: Deeplearning.ai by Coursera
AWS Cloud Technical Essentials: Amazon Web Services by Coursera

University selected courses

Databases: 20/20
Algorithm Design: 20/20
Operating Systems : 18.5/20
System Analysisand Design: 19.5/20
Artifcial Intelligence and Expert Systems : 18/20

language & GRE

English: Full professional proficiency — **IELTS Score - Overal: 7** (L: 7.5 | R: 7 | S: 7 | W: 6)
Persian: Native proficiency
GRE: — **Score - Overal: 332** (Q: 168 | V: 164 | W: 4)

References

Dr. Ali Harounabadi: Head of Computer Engineering Department of IAUCTB — a.harounabadi@gmail.com
Dr. Parvaneh Asghari: Assistant professor Department of Computer Engineering of IAUCTB — p_asghari@iauctb.ac.ir
Dr. Yasaman Najmabadi: Assistant professor Department of Computer Engineering of IAUCTB — ya.na13701990@gmail.com
Dr. Mahdi Motevali: Assistant professor Department of Computer Engineering of IAUCTB — mmotevali@iauctb.ac.ir
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