Amir
E.P.Moghaddam

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Amir E.P.Moghaddam

Computer Science and Engineering

Education

Sep. 2017 - Feb. 2023, K. N. Toosi University of Technology, Tehran, Iran

- B.Sc., Computer Engineering. GPA: 15.31/20 (3/4)
- Thesis: Windshield Reflection Removal under the supervision of Dr. Behrooz Nasihatkon.

Resrach Interests

Machine Learning
Computer Vision and NLP

Honors and Rewards

Ranked 180th among more than 50,000 applicants in the nationwide university entrance, 2017

Research Experience

Motion planning using Reinforcement Learning for self-driving cars. Research internship under the supervision of Prof. Dr. Matthias Althoff at the Technical University Of Munich. (JUL-SEP 2021)

Teaching Experience

fall 2020, **TA and grader of Signal And Systems by Dr. Fatemeh Rezaei**

winter 2019, **TA and grader of Hardware Software Co-design by Dr. H. Roodaki**

Selected Courses and Certificates

summer 2020, **MIT RES.6-012, Introduction to Probability by Prof. John Tsitsiklis**

summer 2020, **MIT 18.06, Linear Algebra by Prof. Gilbert Strang**

spring 2020, **Stanford CS231n, Convolutional Neural Networks for Visual Recognition by Prof. Fei-Fei Li**

spring 2020, **Neural Networks and Deep Learning by Prof. Andrew Ng**

spring 2020, **Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization by Prof. Andrew Ng**

spring 2020, **Structuring Machine Learning Projects by Prof. Andrew Ng**

fall 2019, **MIT 6.003, signals and systems by Prof. Dennis Freeman**

fall 2019, **Georgia Tech, Introduction to Computer Vision by Prof. Aaron Bobick**

summer 2019, **Intro to TensorFlow for Deep Learning by AWS**

summer 2019, **Stanford, Machine Learning by Prof. Andrew Ng**

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Selected AI Projects

Personal Projects

- Edge Motion Detection by Discrete Markov Random Fields and Belief Propagation.

Spring 2021, Fundamentals of Computer Vision by Dr. Behrooz Nasihatkon

Selected Projects :

- Final Project: producing BEV (bird's eye view) perspective of a soccer match live stream. (PyTorch, OpenCV)

fall 2020, System Analysis and Design by Dr. Mehdi Esnaashari

Selected Projects :

- Recommender System for an art website (combination of content base, collaborative filtering, and latent space model) (PyTorch)

Spring 2020, Stanford cs231n by Prof. Fei-Fei Li

Selected Projects :

- LSTMs For Image captioning COCO data set (PyTorch)
- Standard GAN, DC-GAN, LS-GAN to generate Images close to MNIST data. (PyTorch)

Spring 2020, Neural Networks and Deep Learning by Prof. Andrew Ng

Selected Projects:

- Deep Neural Network for Image Classification (python)
- Logistic Regression for cat recognition (python)

Spring 2020, Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization by Prof. Andrew Ng

Selected Projects:

- leveling up network accuracy by different tricks :
  initialization i.e. Xavier, ...
  reguralization i.e. drop out, batch normalization,... (python)

Summer 2019, Stanford University Machine Learning by Prof. Andrew Ng,

Selected Projects:

- Image Compression With K-Means Clustering (Matlab|Octave)
- PCA On Face Images (Matlab|Octave)
- Recommender Systems For Movies (Matlab|Octave)

Programming Languages

Python , Java , C , C++ , Matlab , Octave , SQL , Assembly

Languages and Test Scores

Persian (native)
English (TOEFL iBT 96)