TAHA SAMAVATI

Machine Learning and Deep Learning Engineer

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SKILLS

Python | Machine Learning | Deep Learning | Scipy | Numpy | Scikit-Learn | Tensorflow 2 | Pytorch | Keras API | Data Visualization | Statistical Analysis | Git VCS | REST | SQL

KNOWLEDGE

Computer Vision Algorithms | Deep Computer Vision | Object detection | Implicit Representations | Novel Compression | Probabilistic Language Models | Recommender Systems | Word Embeddings | Transformers | Sentiment Analysis | Boosting Algorithms | Deep NLP | Opencv | Embedded Systems

LANGUAGES

Persian: Native

English: Professional

ABOUT ME

Deep Learning and Machine Learning researcher with a focus on computer vision. familiar with NLP algorithms both traditional techniques and novel ones leveraging deep neural networks. Passionate about data visualization and analysis. previously, worked as android developer.

EXPERIENCE

Deep learning Engineer | BMN.ir

Sep 2020 – March 2021 | Iran, Tehran

- Estimation of vital signs from input videos
- Deep Heart-rate and spO2 measurement from facial images and finger tips
- Also Developed an Android app for AI inference

Junior Machine Learning | Caro AI

July 2018 – Nov 2018 | Iran, Tehran

- Persian Sentiment Analysis
- Deep Energy Disaggregation
- Developed Android App for AI inference

Android Developer | Gandom

Sep 2016 – Jan 2017 | Iran, Tehran

EDUCATION

Artificial Intelligence | Iran University of Science and Technology

2019 – present | Iran, Tehran

- GPA: 3.75/4

Electrical Engineering, Instrumentation and Control | Khajeh Nasir Toosi University

2015 – 2019 | Iran, Tehran

- GPA: 3.2/4

PROJECTS

Single Image Super Resolution | Final Project for IUST Master's course | Selected as Featured |

Spring 2020

- An implementation of a neural network capable of upscaling input image by a factor of 4 preserving high-frequency details. I also implemented a novel fully convolutional discriminator with much lower parameter count than ordinary ones. Report

Supervised learning of Sentence Embeddings (InferSent) | Natural Language processing (IUST Master's course) |

Fall 2019

- In this project, I implemented Facebook's supervised algorithm of learning sentence representations, which has a hugely faster training time and comparable performance to unsupervised methods such as Skip-Thoughts and also capability of transferring to other non-sentiment based NLP tasks.

Unsupervised Image-to-Image Translation | Machine Learning (IUST Master's course) |

Spring 2020

- I wrote a literature review about the field and also implemented innovative paper called ''Cycle-GAN" with Tensorflow 2. The ''Cycle-GAN" uses Cycle-consistency loss to generate a picture in domain B from domain A. For example, The network is able to translate an image taken from horses (domain A) to the same image with zebras (domain B).

Movie Review Sentiment Analysis with detailed performance analysis) |

Fall 2019

- In this project I provide a detailed analysis on performance of different represesentations and classifiers on Movie Review dataset (Sentiment classification). For more information, check github repo.

Classification of unbalanced datasets using Boosting Techniques |

Fall 2019

- Classification on Unbalanced Datasets using Boost Techniques (AdaBoost M2, SMOTE Boost, RusBoost,..) For detailed information, check github repo.

End to End Steering Angle Prediction | Bachelor's Final Project

Summer 2019

- My project goal was to implement a driving assistant system based on images captured from a single camera installed in front of a car. The driving assistant software can predict steering angles in real-time and alert in the situations which the car is out of road lanes.

CERTIFICATES AND ACHIEVMENTS

Ranked Top 1% | Quera Data Science Contest

Ranked 4th among AI students | Department of Computer Engineering, Iran University of Science and Technology, Teharan, Iran

Using Databases with Python | Michigan State University | Coursera |

DeepLearning.AI TensorFlow Developer | Coursera |