Mohammad Doosti Lakhani

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Summary

I am a computer engineering student and I am working on Deep Learning, Machine Learning, Computer Vision and NLP.

I am currently working on computer vision and image processing for semantic segmentation to improve descreening and rescreening quality. I am also working on deep reinforcement learning as a promising field.

I love AI and my childhood's dream to do anything better with AI is going to happen with my hands.

Education

University of Guilan **Rasht, Guilan Province**
Bachelor's Degree Graduating August 2019

3rd place of university with **GPA 93%** (18.68 / 20) - Click to download transcript.

Courses:

- Data Structure
- Algorithm Design
- Discrete Mathematics
- Calculus 1, 2
- Statistics
- Signals & Systems
- Computer Vision
- Artificial Intelligence
- Computational Intelligence
- Computer Aided Design (VHDL)
- NLP
- and many more... .

University of Guilan **Rasht, Guilan Province**
Teacher Assistant

- Advanced Programming 2018 (Dr. Mirroshandel)
- Algorithm Design 2017 (Dr. Shakeri)
- Computational Intelligence 2018 (Dr. Shakeri) - Access to defined projects and materials
- Algorithm Design 2018 (Dr. Shakeri)

Online Courses Enrolled 2018

- Coursera Machine Learning - Homepage
- Super Data Science Machine Learning course - Homepage
- Super Data Science AI course - Homepage

- Coursera Deep Learning - Homepage
- Higher School of Economics - Natural Language Processing - Homepage
  Deep Reinforcement Learning UC Berkeley - Homepage

University of Tehran **Tehran, Tehran Province**
University of Tehran Deep Learning Summer School 2018 - Homepage - Repository Enrolled July 2018

In this school, professors had presentations about ANN, CNN, GAN etc. Hands on assignments were with python and Keras.

Hobbies & Interests

I am interested in **Computer Vision** using deep learning specially **image processing.**
I am also interested in building agents using **Deep Reinforcement Learning**.

I love communicating with people, **learning new things** from them and **teaching** everything I know to help other people understand things better and of course this help me to understand other aspects of a problem.

Professional Skills

Python:	*Advanced*	*Pytorch:*	*Advanced*
Mathematics:	*Advanced*	*Sklearn:*	*Intermediate*
Deep Learning	*Advanced*	*Scipy:*	*Intermediate*
Evolutionary Algorithms	*Advanced*	*Keras:*	*Intermediate*
Machine Learning	*Intermediate*	*HTML/CSS:*	*Intermediate*
		MS Office:	*Competent*

Languages

Persian: *Native*
English: *Conversational*

Personal Projects

May 2018 - Present

- **Clustering Algorithm Based on Fuzzy Systems & Cohort Intelligence (in progress):**
  - In this study, we tried to apply a fuzzy system to change hyperparameters of problem. The main idea of paper is to cluster data based on cohort intelligence (genetic) and k-means algorithm.

September 2017 - December 2017

- **Optimized MDRVP problem:**
  - The main idea of paper is to assign some customers to specific routes and depots with respect to their constraints such as distance and weights. Each depot and vehicle (route) has capacity. we modified it and we got better results from the reference paper. Repository

November 2018

- **Convolutional Networks for Biomedical Image Segmentation (Ronneberger et al., 2015) paper impelemtation:**
  - Implementation using PyTorch and Python
  - Link to paper: https://arxiv.org/abs/1505.04597 - Repository

December 2018

- **Semantic Segmentation and Scene Parsing using Deep Convolutional Neural Networks**
  - Implementation using PyTorch and Python
  - In this implementation, different papers and architectures has been studied and implemented with some modification to construct our combined model of these models.
  - Papers has been used:
    - Deep Residual Learning for Image Recognition - https://arxiv.org/pdf/1512.03385.pdf
    - Dilated Residual Networks - https://arxiv.org/pdf/1705.09914.pdf
    - Training Deeper Convolutional Networks with Deep Supervision - https://arxiv.org/pdf/1505.02496.pdf
    - Pyramid Scene Parsing Network - https://arxiv.org/pdf/1612.01105.pdf
  - Repository

December 2018 - Present

- **Deep Context-Aware Descreening and Rescreening of Halftone Images paper implementation:**
  - Implementation using Pytorch and Python
  - Implementation is in progress and will be published as finished. https://doi.org/10.1145/3197517.3201377
  - You can access different parts of implementation of this paper by these repositories:
    - https://github.com/Nikronic/Places365-Preprocessing
    - https://github.com/Nikronic/Halftoning-Algorithms
    - https://github.com/Nikronic/CoarseNet
    - https://github.com/Nikronic/ObjectNet
    - There will also repositories for EdgeNet, GAN, etc. Any new repositories will be available on my github account (click).

    Repository

July 2018 - Present

- **Coursera Machine Learning with Python (in progress):**
  - All assignments done with python in vectorized structure
  - All optional assignments done. Repository

July 2018

- **Apply Different Machine Learning Models using SKlearn framework:**
  - All assignments done with python in vectorized structure
  - All optional assignments done. Repository

Social

Github **Twitter**