# Mohammad Doosti Lakhani

## **Computer Engineering Student**

**\** +989379156599

nikronic.github.io

@ nikan.doosti@outlook.com

@ m\_doostilakhani@comp.iust.ac.ir



## **EDUCATION**

## Iran University of Science and Technology

#### MS, Artificial Intelligence

Best university of the country in 2016

▼ Tehran, Iran

#### **University of Guilan**

#### B.Sc in Software Engineering, GPA: 18.63/20

May 2019 - May 2019

Rasht, Iran

Ranked 3rd in class - (Transcript)

#### Malek Ashtar High School

#### Diploma in Mathematics and Physics Discipline, GPA: 19.50/20

♥ Karaj, Iran

# WORK EXPERIENCES

#### Matrix Company

#### Member of Hardware Failure Team

# July 2016 - March 2018

▼ Tehran, Iran

I was working on assembling procedure and I and other members detect failures and repair them (Website).

# TEACHING ASSISTANT EXPERIENCES

#### University of Guilan

**Computational Intelligence** 

Head TA

M Sep 2018 - Feb 2019

Rasht, Iran

Instructor: Dr. M. Shakeri

My responsibilities were designing and assessment evolutionary algorithms projects and teaching Python programming language (Class Materials).

#### University of Guilan

Algorithms Design (2 times)

Head TA

m Sep 2017 - Jul 2018

Rasht, Iran

Instructor: Dr. M. Shakeri

My responsibility was assessment of student assignment.

# HONORS AND AWARDS

- Ranked 3<sup>rd</sup> in class, B.Sc 2014-2019
- Full Scholarship, B.Sc, University of Guilan Aug 2015
- Ranked 1st in all years of high school 2011 - 2015
- Exceptional Talent of **Department of Computer Engineering - University of Guilan** 2015
- **Accepted as Exceptional Talent** at Department of Computer **Engineering - Iran University of** Science and Technology 2019
- Among top 0.19 percent of PyTorch Forum members(Profile) Nov 2018 - Nov 2019

# RESEARCH INTERESTS

Deep learning

**Evolutionary Algorithms** 

Digital Image Processing

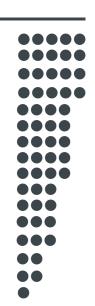
**Computer Vision** 

Reinforcement Learning

# **SKILLS**

Python **PyTorch** Git/VCS **Teamwork** Scipy Sklearn MS Office Powershell Windows Linux **VHDL Tensorflow SQL** C++ Wolfram

Scala



#### University of Guilan

#### **Advanced Programming TA**

## Feb 2018 - Jul 2018

Head TA

Rasht, Iran

**Instructor: Dr. S. A. Mirroshandel** My responsibilities were as follow:

- Teaching GUI design, object-oriented and socket programming using java.
- Designing assignments.
- Assessment of students' assignments.

# **LANGUAGES**

Persian (Native) English



## **HOBBIES**

Learning Cultures

Gaming

Music

# **COMMUNITY**

## Rasht Public AI Community

#### Lecturer

₩ Oct 2018

Rasht, Iran

I usually give lecture for student from different field of studies. I gave a lecture in last meet up and I scheduled other lectures for coming meetings. These meeting are free for all, always!

The materials of these meetings can be found in here.

# **B.Sc FINAL PROJECT**

"Deep Context-Aware Descreening and Rescreening of Halftone Images" Implementation

Tae-hoon Kim and Sang II Park. 2018. ACM Trans. DOI.

Supervisors:

- Dr. Mahdi Aminian University Of Guilan (Homepage)
- Dr. Vahid Babaei Max Planck Institute for Informatics (Homepage)

You can access different parts of implementations of this paper using below repositories:

- github.com/Nikronic/Places365-Preprocessing
- github.com/Nikronic/Halftone-Algorithms
- github.com/Nikronic/CoarseNet UNet (arxiv)
- github.com/Nikronic/ObjectNet PSPNet (arxiv)
- github.com/Nikronic/EdgeNet
- github.com/Nikronic/DetailsNet

# REFERENCES

#### Dr. Mojtaba Shakeri

Research Scientist at Singapore Institute of Manufacturing Technology (SIMTech) Singapore, Singapore mojtaba\_shakeri@SIMTech.a-star.edu.sg (65) 6501 1800

#### Dr. Mahdi Aminian

Assistant Professor at University of Guilan Rasht, Iran mahdi.aminian@guilan.ac.ir

#### Dr. Vahid Babaei

CAM group leader at Max Planck Institue for Informatics Saarbrücken, Germany vbabaei@mpi-inf.mpg.de

Dr. Seyed Abolghasem Mirroshandel Assistant Professor at University of Guilan Rasht, iran

mirroshandel@guilan.ac.ir

# **CERTIFICATES**

#### **Deep Learning Specialization**

#### Coursera, by Andrew Ng

Deep Learning Specialization consists of five different courses:

- Neural Networks and Deep Learning
- Improving Deep Neural Networks: Hyperparameter tuning Regularization and Optimization
- Structuring Machine Learning Projects
- Convolutional Neural Networks
- Sequence Models

# Machine Learning Course Coursera, by Andrew Ng

₩ Nov 2018

#### **Natural Language Processing**

Coursera, by Higher School of Economics

## Aug 2018

Deep Learning Summer School 2018 University of Tehran

# SELECTED ACCOMPLISHED PROJECTS

- Optimized Multi-Depot Vehicle Routing Problem: The main idea of paper is to assign customers to specific depots and also assigning them an optimal route with respect to some constraints. We modified the proposed genetics method in reference paper and we have got better results. (Repo)
- Open Source Contributer
   I am highly motivated at participating to open source project to help
   myself and other developers to build better tools for solving real life
   issues, from contributing to small docs to PyTorch framework on
   Github.
- Clustering Algorithms Based on Fuzzy Systems & Cohort Intelligence: In this study, we are trying to apply fuzzy systems to optimize hyperparameters of problem. The main idea of paper is to cluster data based on Cohort Intelligence (Genetics) and K-means clustering. (currently suspended)
- Coursera Machine Learning Course by Stanford Implementation using Python from scratch: In this project, I implemented all assignments in vectorized form using only Numpy library (Repo).
- Apply Different Machine Learning Models using SKlearn: I used SKlearn to fit different machine learning models on different tasks and showed the its usages (Repo).
- News Classification: Final project of Natural language processing course by University of Guilan (Repo).
- Music Recommender: Implemented with Python and it was the final project of Artificial Intelligence course.