Yasaman Mirmohammad

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RESEARCH INTERESTS

- Machine Learning
- Deep Learning
- Natural Language Processing
- Pattern Recognition/Image Processing
- Data Analysis/Signal Processing
- Computational Neuroscience/Cognitive NeuroScience
- Computer Vision
- Cognitive Robotics

EDUCATION

Amirkabir University of Technology, Tehran, Iran

- B.S. in Computer Engineering,
- **GPA(selected courses): 16.6/ 20** ,including:

Mathematics2 Engineering Statistics, Logic design, Logic Circuits Computer Architecture Laboratory, Technical English, Research Technical Presentation, Digital Electronics, Operating Sys. Design (I), Electronic Circuits Lab, Microprocessor (I) and Assembly Language, Microprocessors (I) Lab, Computer Architecture Internship, Foundations of Data Mining, Engineering Economics, Signals and Systems, Database Design Lab, Digital Electronics Lab, Special Topics (Information Security), Programmable Digital Systems Design, Discrete Mathematics, English for the Students of Engineering

- **GPA(last 4 semester): 15.25/20,Passed Credits: 56**
- **GPA(Total): 14.16/20,Passed Credits: 121** Sep 2015 – Sep 2019

Sama School(2008-2014) , Sadra School(2014-2015), Tehran, Iran

- Diploma in Mathematics and Physics Discipline, GPA: 19.78/20 2010– 2015

RESEARCH EXPERIENCE

- **IPM,School of Cognitive sciences**

(Researcher,under supervision of Dr Moein Esghaei) May 2019 – Now
  - This project is in cooperation between the IPM School of cognitive sciences, UCLA's Brain research institute, and the German Primate Center. The project focuses on the physiological origins of attention in the monkey brain.
- **Bio-Inspired System Design Lab**

(Amirkabir University of Technology,Iran,Tehran) May 2018 – Sep 2019
  - Design and Implementation of a knn-regression based method for ball trajectory prediction
- **Shahid Rajaee Teacher Training University, Iran,Tehran** Aug 2018 – Nov 2019
  - Implementation of a congnitive style based English Learning Application
- **Lab of Brain and Cognitive science**

(Royan Institute of Research,Iran,Tehran) Jan 2018 – Jan 2019
  - Internship under Supervision of Dr.M.Khaligh Razavi
  - Disease Trajectory Detection via Deep learning,under Supervision of Dr Mahdi Khaligh Razavi
- **Big Data Lab**

(Amirkabir University of Technology,Iran,Tehran) Jun 2018 – Oct 2018
  - DeepFM: A Factorization-Machine based Neural Network for CTR Prediction
  - Wide and Deep Graph Convolutional Neural Network Matrix Completion under Supervision of Dr.M.Amihaeri
- **Lab Of Robotics and Cognitive science**

(Amirkabir University of Technology, Iran,Tehran) Aug 2017 – Dec 2017
  - Project: Datamining and Cognitive science concepts

HONORS & AWARDS

- Awarded fellowship,undergraduate program,Department of Computer Engineering, Amirkabir University of Technology Sep 2015 – Now
- Member of Coursera Mentoring Team(IBM Courses): Aug 2018 – Now
  - •Fundamentals of Scalable Data Science

•Advanced Machine Learning and Signal Processing

•Applied AI with DeepLearning

•Advanced Data Science Capstone

- Ranked top 0.4 % among more than 180,000 students participated in the nationwide entrance examination of undergraduate studies in Iranian universities 2014 – 2015
- accepted for 2nd level of computer Olympiad 2013
- Member of National Organization for Bilingual Schools 2007 2014

PUBLICATIONS

•[1] Wide and Deep Graph Convolutional Neural Network Matrix Completion, (To Be Submitted)

•[2] Yasaman Mirmohammad, Shayan Khorsandi, Mohammad Navid Shahsavari, Behnam Yazdankhoo, Soroush Sadeghnejad,accepted to the ICRoM conference 2019, Jul 2019

TEACHING EXPERIENCE

Principles of Datamining,Amirkabir University of Technology Fall 2019
- Instructor: Dr. Khabbaz

Principles of Datamining,Amirkabir University of Technology Spring 2019
- Instructor: Dr.E.Nazerfard

Principles of Programming,Amirkabir University of Technology Fall 2018
- Instructor: Dr.E.Nazerfard

Probability and statistics,Amirkabir University of Technology Fall 2018
- Instructor: Dr M.Amirhaeri

Digital Electronic,Amirkabir University of Technology Fall 2018
- Instructor: Dr H.Farbeh

Discrete Mathematics,Amirkabir University of Technology Spring 2016
- Instructor: Dr.m.s.Fallah

Discrete Mathematics,Algebra and Geometry,Sadra School Fall 2016
- Instructor: Dr.m.Rashedi

Fundamentals of Physics,Sadra School Fall 2016
- Instructor: A.Jamshidi

LANGUAGE SKILLS

- **Persian**: Native language.
- **English**: Fluent (speaking, reading, writing).
- **French**: Basic (reading); basic (speaking, writing).

TECHNICAL SKILLS

•**Programming and Development**

–Python(2,3)
–C,C++
–Java
–MATLAB
–HTML+CSS
–JavaScript
–php

• **Software libraries and distributions**:

–OpenCV
–Tensorflow
–Keras
–Yolo
–Cuda and Openmp
–NLTK and Gensim

•**DataBase Design**

–MySQL
–NoSQL(MongoDB)

•**Others**:

•LaTeX

•Microsoft Word,Excel,PowerPoint

PROJECTS

•**Data Structure** :

–search engine using inverted index algorithm(C++)

–Finite-State Automata (Java)

•**Advanced Computer Programming**:

–Implementation of a graphical game (BattleShip-Online) (Java)

–Implementation of a simple image editor (Java)

–Implementation of a simple Encryption and encoding System (Java)

•**Principles of Computer and Programming** :

–living cell simulation (C)

•**Logic Design** :

–Designing a Traffic Light System (Verilog)

•**Computer Architecture and design** :

–Basic Computer,Compiler,Cache,Pipeline(VHDL)

•**Operating Systems**:
,Multithreading in Windows and Linux(C)

•**Design Automation**:

–Phase1:Implementation of a car parking system(VHDL).

–Phase2:Implementation of a co-software,hardware design using Microblaze(VHDL).

–Phase3:Implementation of a Plant-Watering System with a moisturizing detection system(VHDL)

–Implementation of a word-detector system using ”LSTM” Neural Networks, designing and Implementation on FPGA.

•**Advanced Mathematics**:

–Phase1:Analyzing Distribution categories of a two class problem And PCA(Python,MATLAB)

–Phase2: Facial Recognition with Singular Value Decomposition(Python) based on paper

•**Artificial Intelligence**:

–Implementation of Classical and Non-Classical searches(BFS,DFS,Simulated annealing,Hill Climbing,Genetic) - (Python,Java,C++)

•**Principles of Data Mining**:

–Basic Methods and Algorithms of Supervised and Unsupervised Learning, all available here(Python)

•**Principles Web programming**:

–Front-end Back-end programming. project was based on deigning **Reyhoon** website. you can find it here:here

CHALLENGES AND SELF STUDIES

•**Contests**

–**Amirkabir First Data mining Challenge**(Fall 2017)

*Analyzing the bank customer’s information

*Predicting the result

–**Deca Dataminig challenge**, Sharif University of Technology(Winter2018)

*Analyzing the Notification of an App and the effect of different kind of notifs on the satisfaction of the users.

–**Fanavard Dataminig challenge**,(Spring 2018)

*Analyzing and predicting of gold cost considering the cost in previous months

*Ranked top 7 teams for the final level(Summer 2018)

–**Amirkabir 2nd Data mining Challenge**(Winter 2019)

*Time Series Analysis with LSTMc and Arima models

– **Sharif Machine Learning Workshop**(Winter 2018):

*Python Libraries for machine learning,Deep learning:Keras, Tensorflow

–"Dog Breed Identification Challenge " (Kaggle,Winter 2018)

–"TensorFlow Speech Recognition Challenge " (Kaggle,Spring 2018)

•**Courses**

–"Kaggle Deep Learning Course"(Winter 2018)

– Machine Learning by Stanford University on Coursera (Certificate earned at Thursday, July 19, 2018 4:00 PM GMT)

–Neural Networks for Machine Learning by University of Toronto on Coursera (Certificate earned at Sunday, September 2, 2018 6:35 PM GMT)

–Introduction to Programming with MATLAB by Vanderbilt University on Coursera(Certificate earned at Thursday, July 26, 2018 10:57 AM GMT)

–Introduction to Big Data by University of California San Diego on Coursera(Certificate earned at Tuesday, July 24, 2018 7:14 AM GMT)

–Introduction to Deep Learning by National Research University Higher School of Economics on Coursera(Certificate earned at Tuesday, August 14, 2018 6:22 AM GMT)

–"Coursera Computational Neuroscience course",University of Washington(Spring 2018 - Now)

–"Coursera Visual Perception and the Brain course",Duke University(Spring 2018 - Now)

–"Introduction to Data Science in Python"(September 2018)

–"Mathematics for Machine Learning: Linear Algebra"(September 2018)

–"Robotics Specialization:University of Pennsylvania"(October 2018)

INTERESTS Philosophy, Painting , Badminton , Music , Language and communication , History, Swimming

REFERENCES

•seyed@cognetivity.com

•aesghaei@dpz.eu

FURTHER INFORMATION All Available in:**Github**