

Research Interests

Deep Learning • Computer Vision
Object Recognition • Human-Computer Interaction

Education

M.Sc. | Electrical Engineering

University of Tehran | 2017 - 2020

- GPA: 3.77/4 (17.22/20)
- Thesis: Control of Computer Mouse Using Hand Gesture Recognition
- Advisors: Ahmad Kalhor, Samad Sheikhaei

B.Sc. | Electrical Engineering (Control)

Amirkabir University of Technology
(Tehran Polytechnic) | 2012 - 2017

- Last-two-year GPA: 3.34/4 (16.64/20)
- Thesis: Driver's Consciousness Level Analysis Using EEG Signals
- Advisor: Mohammad A. Khosravi

Selected Courses

- Deep Learning (20/20)
- Computer Programming (C++) (18.6/20)
- Computational Intelligence (18/20)
- Linear Algebra (16.9/20)
- Engineering Mathematics (19.25/20)

Skills

Programming Languages

Fluent: Python

Familiar: MATLAB • C/C++

Machine Learning Frameworks and Libraries

TensorFlow • Keras • OpenCV • PyTorch

Online Courses on Coursera

- Neural Networks and Deep Learning (Certificate)
- Improving Deep Neural Networks (Certificate)
- Structuring Machine Learning Projects (Certificate)
- Convolutional Neural Networks (Certificate)
- Convolutional Neural Networks in TensorFlow
- Introduction to TensorFlow
- Sequence Models

Languages

English: IELTS Mock Test: 7/9 (Exam on 29th May)

Farsi: Native Speaker

References

- Ahmad Kalhor (akalhor@ut.ac.ir)
- Samad Sheikhaei (sheikhaei@ut.ac.ir)
- Mohammadreza Kolahdouz (kolahdouz@ut.ac.ir)

Publication

Control of Computer Pointer Using Hand Gesture Recognition in Motion Pictures [arXiv]

Yalda Foroutan, Ahmad Kalhor, Saeid Mohammadi Nejati, Samad Sheikhaei
Under Submission

Research Experience

Research Assistant in University of Tehran | 2018 - 2020

Advanced Circuits for Data Communication Laboratory, Samad Sheikhaei

I have contributed to design an app for mouse pointer based on hand gesture recognition for Windows and Linux.

Honors

Offered Ph.D. Admission from University of Tehran | 2020

Recognized Exceptional Talent by National Organization for Development of Exceptional Talents (NODET) | 2005, 2008

Ranked 2nd in Iran Mathematics Olympiad PAYA | 2008

Ranked 1st in Abadan Mathematics Olympiad | 2006

Teaching Experience

Teaching Assistant at University of Tehran

Neural Networks and Deep Learning | Spring 2020

by Ahmad Kalhor

designing projects, managing teaching assistant sessions

Teaching Assistant for Electronic 1 | Spring 2020, Fall 2019

by Mohammadreza Kolahdouz

designing homework and quizzes, holding teaching assistant sessions

Teaching Assistant for Electronic 3 | Fall 2019

by Omid Shoaee

homework grader

Selected Academic Projects

M.Sc. Thesis | University of Tehran

Control of Computer Mouse Using Hand Movement Detection

collection of 6720 samples from 15 persons' hand gestures, built and optimized classification CNN model and similarity NN (TensorFlow in Google Colab)

B.Sc. Thesis | Amirkabir University of Technology

Driver's Consciousness Level Analysis Using EEG Signals

optimized classification NN, SVM and kNN (MATLAB)

Neural Networks and Deep Learning (Python)

- Design of a CNN Classifier for Fashion MNIST Dataset
 - Implementation of an RNN Network for Stock Market Prediction
 - Text Generation Based on Shakespeare's Book with an RNN Network
 - Development of GAN Networks on Fashion MNIST and CIFAR-10 Datasets using DCGAN, WGAN, ACGAN networks
- improving the GAN networks with one-sided label smoothing and adding noise

Other Projects

- Simulation of Bees Algorithm (MATLAB)
- Control of UGV Robot (C)
- Design of a Controller for Router Robot (MATLAB)
- Design of a Filter For Communication Systems (MATLAB)
- Image Processing and Car Race Simulated (Codeblocks)