

## Research Interests

Deep Learning • Machine Learning  
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)

### 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

## Skills

### Programming Languages

Fluent: Python

Familiar: MATLAB • C/C++

### Machine Learning Frameworks and Libraries

TensorFlow • Keras • OpenCV • PyTorch

### Languages

English: IELTS (2021): 7.5/9

Farsi: Native Speaker

## References

Ahmad Kalhor ([akalhor@ut.ac.ir](mailto:akalhor@ut.ac.ir))

Samad Sheikhaei ([sheikhaei@ut.ac.ir](mailto:sheikhaei@ut.ac.ir))

Mohammadreza Kolahdouz ([kolahdouz@ut.ac.ir](mailto:kolahdouz@ut.ac.ir))

## Work Experience

AI Developer at Avir | Spring 2021

## Publication

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

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

Submitted in *Image and Vision Computing*

## Research Experience

### Research Assistant in University of Tehran | 2018 - 2020

Advanced Circuits for Data Communication Laboratory, Samad Sheikhaei

I have designed an algorithm for computer 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 2<sup>nd</sup> in Iran Mathematics Olympiad PAYA** | 2008

**Ranked 1<sup>st</sup> in Abadan Mathematics Olympiad** | 2006

## Teaching Experience

Tutorial Teaching Assistant at Neuromatch Academy

**Computational Neuroscience** | Summer 2021

**Deep Learning** | Summer 2021

Teaching Assistant at University of Tehran

**Neural Networks and Deep Learning** | Spring 2020

Head Teaching Assistant: Designing Projects, Managing TA Sessions

Course Responsible: Ahmad Kalhor

**Teaching Assistant for Electronic 1** | Spring 2020, Fall 2019

Head Teaching Assistant: Designing Homework, Holding TA Sessions

Course Responsible: Mohammadreza Kolahdouz

**Teaching Assistant for Electronic 3** | Fall 2019

Homework Grader • Course Responsible: Omid Shoaei

## Selected Projects

### M.Sc. Thesis | University of Tehran

Control of Computer Mouse Using Hand Movement Detection (Python)

Collection of 6720 Samples from Hand Gestures, Built and Optimized

Classification using Similarity and Convolutional NN

### B.Sc. Thesis | Amirkabir University of Technology

Driver's Consciousness Level Analysis Using EEG Signals

Optimized Classification using NN, SVM, kNN, and DT

**Neural Networks and Deep Learning** (Python)

Design of a CNN Classifier for Fashion MNIST Dataset

Implementation of RNN for Stock Market Prediction

Text Generation Based on Shakespeare's Book with RNN Networks

Development of GANs on Fashion MNIST and CIFAR-10 Datasets

Using DCGAN, WGAN, ACGAN Networks, Improving Generated Images

by the GANs with One-sided Label Smoothing and Adding Noise

**Avir** (Python)

Face Filters: Changing Eye Color and Eye Size

Low light Image Enhancement using GANs

Increasing Image Resolution