Sina Mokhtarzadeh Azar

Emails: sinamokhtarzadeh@gmail.com or @aut.ac.ir or @cafebazaar.ir
Git: github.com/sinaazar
Homepage: sinaazar.github.io
Google Scholar: Sina Mokhtarzadeh Azar

Research Interests

- Fundamental Topics
  - Deep Learning
  - Computational Efficiency of Deep Models
  - Generative Adversarial Models
  - Probabilistic Graphical Models
- Applications
  - Human Activity Recognition (specifically Group Activities) in image or video
  - Person Recognition in unconstrained images where face information may not be available
  - Human Pose Estimation in Video
  - Face Recognition

Education

- **Amirkabir University of Technology** Tehran, Iran
  MSc in Artificial Intelligence *2016 - 2018(expected)*
  - GPA : 18.24/20 (Ranked 3rd)
  - Thesis : Group Activity Recognition in Video
  - Courses: Machine Learning (18.8), Statistical Machine Learning (18), Computer Vision (17.6), Probabilistic Graphical Models (18.5), Natural Language Processing (18.09), Neural Networks (17.6), Seminar (19.57), Statistical Pattern Recognition (18.75), Fuzzy Systems Methods (17.7)
- **Amirkabir University of Technology** Tehran, Iran
  BSc in Software Engineering *2012 - 2016*
  - GPA: 16.28/20
  - Thesis : Design and implementation of a software to detect and recognize famous people's faces in images on the internet
  - Related Courses: Data Mining (19.6)

Honours & Awards

- Head of the scientific committee for the first Amirkabir Data Mining Cup (2017)

- Among two accepted students for the exchange MSc program with University Paris-Est Creteil (rejected the offer because of a change in program start from winter to fall)(2017)
- Ranked 3rd (2nd among students with sufficient credits) among class 2016 of MSc students in Artificial Intelligence and awarded as an outstanding student (2016-2017)
- Among 25 finalist teams from more than 200 teams in Fanavard Data Mining Contest (2016)
- Ranked 54 in the National University Entrance Exam for Master in Artificial Intelligence and Admission to Amirkabir University of Technology (2016)
- Ranked in the top 0.5% in the National University Entrance Exam among 230000 students and Admission to Amirkabir University of Technology (2012)

Publications

- **Humanoid Robot Detection using Deep Learning: A Speed-Accuracy Tradeoff**
  Mohammad Javadi, Sina Mokhtarzadeh Azar, Sajjad Azami, Saeed Shiry Ghidary, Soroush Sadeghnejhad, Jacky Baltes
  In Robocup Symposium. July, 2017.
- **A Multi-Stream Convolutional Neural Network Framework for Group Activity Recognition**
  Sina Mokhtarzadeh Azar, Mina Ghadimi Atigh, Ahmad Nickabadi
  Currently, under editor evaluation in Computer Vision and Image Understanding Journal. Submitted on July 23rd 2018.
- **Zoom-RNN: A Novel Method for Person Recognition Using Recurrent Neural Networks**
  Sina Mokhtarzadeh Azar, Sajjad Azami, Mina Ghadimi Atigh, Mohammad Javadi, Ahmad Nickabadi
  avialable on arxiv (1809.09189), September, 2018.
- **Convolutional Relation Machine for Group Activity Recognition**
  Sina Mokhtarzadeh Azar, Mina Ghadimi Atigh, Ahmad Nickabadi, Alex Alahi
  Submitted to Computer Vision and Pattern Recognition 2019.

Teaching Experience

- **Machine Learning**
  Under supervision of Dr. Nazerfard *Fall 2017*
- **Statistical Machine Learning**
  Under supervision of Dr. Nickabadi *Fall 2017*
- **Data Mining**
  Under supervision of Dr. Nazerfard *Winter 2017*

Work Experience

- **Member of data science group for summer internship At Farabord**
  I worked on some data mining tasks *Summer 2015*
- **Member of data science team At Cafe Bazaar**
  We develop automatic review methods for Divar.ir (eBay of Iran) *Summer 2018 - Present*

Ongoing Research Projects

- **Pose estimation in video: forward or backward?**
  Membors: Mina Ghadimi Atigh, Sina Mokhtarzadeh Azar
  Under supervision of Dr. Nickabadi

Topics of Related Course Projects

- **Projects in Neural Networks Course (using python, keras and caffe)**
  Topics: LSTM for time series, CNN for image classification (cifar10), Cascaded Correlation Network (CCN), Restricted Boltzman Machine (RBM), Jordan Recurrent Network, Self Organizing Map (SOM) and Growing SOM (GSOM), Multi Layer Perceptron (MLP), Perceptron and Adaline
- **Projects in Probabilistic Graphical Models Course (using python)**
  Topics: Markov Random Fields for Image Segmentation, Group Activity Recognition using a Graphical Model
- **Projects in Natural Language Processing Course (using python)**
  Topics: Different feature selection algorithms (Mutual Information, Information Gain, ...), Document Classification, Document Clustering, Part of Speech Tagging, Named Entity Recognition, Word Sense Disambiguation
- **Projects in Computer Vision Course (using OpenCV in python)**
  Topics: Hand Gesture Recognition, Motion Analysis, Stereo Vision, Descriptors and Corner Detectors
- **Projects in Machine Learning Course (mostly in python)**
  Topics: Graph based clustering , SVM, Gaussian Naive Bayes, Logistic Regression, KNN, Regression
- **Projects in Statistical Machine Learning Course (using python)**
  Topics: Statistics , Regression, Time Series, Probabilistic Graphical Models

Technical Skills

- **Programming Languages**
  Python (current focus), Java, R, Matlab, C/C++

- **Tools and Frameworks**
  Tensorflow, Keras, Caffe, OpenCV, Spark, Docker, Kubernetes, Rstudio, Netbeans, LaTex

- **Operating System**
  GNU/Linux, Windows

English Scores

TOEFL: 105 . . . . . 21 November 2015

References

- **Ahmad Nickabadi**
  nickabadi@aut.ac.ir

- **Ehsan Nazerfard**
  nazerfard@aut.ac.ir

- **Saeed Shiry Ghidary**
  shiry@aut.ac.ir