Narges Sayah Dehkordi

Curriculum Vitae

Amirkabir University of Technology
Iran, Tehran
Email: narges.sayah75@gmail.com
narges.sayah@aut.ac.ir
Homepage: ceit.aut.ac.ir/9331042

Education

2014 – 2019 **B.Sc.** in Computer Engineering, Amirkabir University of Technology, Tehran, Iran, Last year's GPA: 3.8/4.0

2010 – 2014 **High School Diploma** in Mathematics and Physics, Farzanegan National Organization for the Development of Exceptional Talents (NODET), Shahr-e-Kord, Iran, Final GPA: 19.1/20.0

Fields of Interest

Applied Machine Learning, Deep Learning, Image Processing, NLP

Bioinformatics, Health Informatics, Neuroscience

Honors

2019 Ph.D. fellowship award, University of California Riverside

2017 Top 50 start-ups of GITEX, Dubai (CommentMiner)
1st place in VCC Cup, Sharif University of Technology (CommentMiner)
3rd ranked start-up of ElecomStars, Tehran (CommentMiner)

2015 Eligible to study in two fields simultaneously

2014 Among top 0.6% of 230K students, Nationwide University Entrance Exam

Research Experiences

2020 – Present **IPM & Sharif Brain Center,** supervised by Dr. Ali Ghazizadeh

2017 – 2018 **Comment Miner,** supervised by Mr. Ahmad Asadi
A B2B start-up providing text analyzing services e.g. topic classification, intelligent chatbots, profanity content detection, sentiment analysis, etc.

2016 – 2017 **FPGA lab,** supervised by Dr. Hamidreza Zarandi
Co-design and hardware implementation on FPGA

2014 – 2016 **ACM lab,** supervised by Dr. Bakhshi
Coding and problem-solving skills practice for ICPC contests

Teacher Assistance

2018 **Embedded Systems Course,** T.A. (Dr. Hamed Farbeh)

2017 & 2018 **Research and Technical Presentation Course,** T.A. (Prof. Reza Safabakhsh)

2016 **Data Structure Course,** T.A. (Prof. Mehdi Dehghan TakhtFooladi)

2015 **Discrete Mathematics Course,** T.A. (Dr. Mehran S. Fallah)

2015 **Principles of Programming Languages,** T.A. (Dr. Saeed Shiry)

2014 **High School Discrete Mathematics Secondary Teacher**

Computer Skills

Python, C#, C, C++, Java, IronPython, Tensorflow, Keras, GibbsLDA++, Mallet, Pythonnet, MATLAB, CUDA, OpenMP, Docker, LaTeX

Selected Lectures

2018 **Foundation of Matrix and Linear Algebra Course,** Lecture on Image Processing
A review on Sunny Verma et al., "Image Compression and Linear Algebra", CMI Projects

2016 **Research & Technical Presentation Course,** Lecture on Deep Learning
Based on L.M. Rasdi Rere et al., Simulated Annealing Algorithm for Deep Learning, Procedia Computer Science, no. 72, pp. 137–144, 2015

2015 **9th AUT Linux and Open Source Software Festival,** Workshop Lecturer

Relevant Attended Congresses

2020 **2nd Intl Workshop on Fundamentals of Machine Learning over Networks**
Topics of interest included (but not limited to), Model compression and efficient distributed ML, Compressed gradient methods and error compensation, Distributed learning on non-IID datasets, Federated learning and privacy-preserving distributed ML

2019 **1st Sharif Neuroscience Symposium**
Lectures and poster sessions on state-of-the-art cognitive science articles

2018 **9th Royan Institute International Summer School on Brain and Cognitive Science**
Lectures on Brain Organoids, Electrophysiology, Optogenetics, EEG-MEG, fMRI-Vision, etc.

Selected Projects

2019 **Face Detection Based Smart Doors,** BSc Thesis
An alternative system to current smart doors, which are movement sensitive. This project was presenting a high speed and memory efficient approach by using Haar cascade face detection algorithm on Arduino Uno microprocessor

2018 **Template Matching with Rotation and Scale,** Parallel Processing Course
Implemented the Template Matching algorithm in CUDA and OpenMP, on a dataset of coin/face images. Parallel Processing provided an acceptable speedup compared to the serial implementation

2018 **MobileNet Image Classification,** University of Tehran
Designed architectures of MLP, CNN, LSTM and RNN using Keras library. The MobileNet model and a dataset of ant/bee images were used to train and test the networks. A sequential classifier was designed using Recurrent Neural Networks on 28 sequences of the dataset images

2018 **Hand-Written Digit Image Generation,** University of Tehran
Tuned a Generative Adversarial Network in Keras generating non-discriminable images similar to the MNIST dataset

2017 **Key-phrase Extraction,** Sharif University of Technology
Generated key-phrases from English text structure using the Salience Rank algorithm and wrote a comparative report of the results. SR caused this version to outperform the supervised and unsupervised approaches implemented in PKE (including TfIdf, SingleRank, TopicRank, KP-Miner, Kea and WINGNUS)

2017 **Persian Word Embeddings,** CommentMiner
Implemented word2vec and doc2vec libraries to generate embedded presentation vectors for Persian text. A CNN was exploited then to extract features and a MLP as a classifier on various datasets.

2017 **Multithread Persian Short-Text Classification,** CommentMiner
Implemented in java using MaxEnt and Naïve Bayes on two datasets: Quiz of King's and Instagram Comments. An accuracy of 70% was achieved