

Narges Sayah Dehkordi

Curriculum Vitae

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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, L^AT_EX

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 Saliency 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