Sina Mahdipour Saravani

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FIELDS OF INTEREST

◇ Deep Learning, Machine Learning
◇ Natural Language Processing, Computer Vision
I am interested in working on the applications of deep learning in NLP (especially intelligent chat bots and text generation) and Computer Vision in addition to the theoretical topics and problems concerning deep learning. I am also curious about self-supervised networks, knowledge transfer and adversarial networks.

EDUCATION

Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran
◇ B.Sc. Computer Systems Architecture, 2014 - 2019
(Ranked 165 top Computer Science Universities in the World)
- Cumulative Grade Average: **3.31**
- Upper-Division GPA:
  Last year: **4**
  Last two years: **3.63**

Samii High School, Rasht, Iran
◇ Diploma in Physics and Mathematics Discipline 2010 - 2014
- Cumulative Grade Average: **20/20**

I also managed to achieve a grade point average of 20/20 during all 12 years of my pre-university education.

RESEARCH AND WORK EXPERIENCE

◇ **Research Assistant and AI Developer, 2017-2018, CommentMiner, Tehran, Iran**
- Supervisors: Mr. Asadi, Dr. Bokaei, Prof. Homayounpour
- CommentMiner is a start-up working on a set of text analyzing services and intelligent chat bots. I spent one year there on research on different NLP tasks like dialogue systems, topic classification, profanity detection, NER, sentiment analysis, etc.

◇ **Key-phrase Extraction on Persian Documents, 2017, Sharif University of Technology**
- Supervisor: Dr. Bokaei
- Literature review was carried out on KP-Miner, TF-IDF, WINGNUS, Single Rank, KEA, Topic Rank and Salience Rank methods. We used Inspec and 500N datasets to test these methods and then worked on Salience Rank model on a Persian news dataset.

TEACHING EXPERIENCE

Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran
◇ *Teacher Assistant*, **Embedded & Real-Time Systems** under supervision of Dr. Hamed Farbeh Fall 2018

Samii High School, Rasht, Iran
◇ *Teacher*, **Calculus 3** and **Chemistry 3** 2013 to 2014

HONORS AND AWARDS

◇ **Top 50 start-ups** in GITEX, Dubai, 2017 (CommentMiner).
◇ **Third place** in ElecomStars, Tehran, 2017 (CommentMiner).
◇ **First place** in Sharif VC Cup, Sharif University of Technology, Tehran, 2017 (CommentMiner).
◇ Certificate of Attendance at **Deep Learning Summer School** from Association for Computing Machinery (ACM) of University of Tehran, 2018.

◇ Member of **Scientific Association and Olympiad Affairs** of Amirkabir University of Technology, 2015.

◇ Ranked in top **0.2**% place among all applicants for the University Entrance Nationwide Exam (Approximately **230000** applicants) in Math. and Eng., Iran, 2014.

◇ Ranked in top **0.09**% place among all applicants for the University Entrance Nationwide Exam (Approximately **129000** applicants) in Foreign Languages (English), Iran, 2014.

Lectures and Presentations

◇ Presentation on GAN
Department of Biomedical Engineering, Amirkabir University of Technology, June 2018
- Based on Ian J. Goodfellow et al., "Generative Adversarial Nets". (Department of Computer Science and Operations Research, University of Montreal), IJCA Journal, Vol. 119 - Number 18, 2015

◇ Presentation on use of linear algebra for neural networks
Department of Mathematics and Computer Science, Amirkabir University of Technology, July 2018
- Based on Herve Abdi, "Linear Algebra for Neural Networks". School of Human Development, The University of Texas at Dallas

◇ Presentation on mobile computers' energy optimization using user habits
Department of Computer Engineering, Amirkabir University of Technology, January 2017
- Mainly based on Ismat Chaib Draa et al., "Sensing user context and habits for run-time energy optimization". EURASIP journal on Embedded Systems, Springer, 2016

Relevant Projects

◇ **Persian Short-Text Classification (NN ver.)**, CommentMiner
Implemented using a CNN network to extract the features from embedded presentation vectors of Persian text and a MLP network to classify them, on different datasets: Quiz of King's questions, Instagram comments about a persian series, (Python).

◇ **Multithreaded Persian Short-Text Classification**, CommentMiner
Implemented using two different algorithms: MaxEnt and Naive Bayes, on the datasets mentioned above with the accuracy of 70%, (Java).

◇ **Template Matching**, Multicore Course Project at Amirkabir University of Technology
Implemented using both OpenMP and CUDA to parallelize the algorithm and to enhance the performance, (C, C++).

◇ **Hand-written Digit Image Generation**, Computational Intelligence Course Project at Amirkabir University of Technology
Implemented using a simple Generative Adversarial Network on MNIST dataset, (Python Keras package).

◇ **Hand-written Digit Image Classification**, CommentMiner
Implemented using a Convolutional Neural Network on MNIST dataset, (Python Tensorflow package).

◇ **Sequential MNIST Classification**, Deep Learning Summer School at University of Tehran
Implemented using a Recurrent Neural Network on sequential images (28 sequences) of MNIST dataset, (Python Keras package).

Relevant Skills

◇ Programming: Java (Expert), Python (Proficient), C/C#/C++ (Proficient)
◇ Tools and Frameworks: TensorFlow, MALLET, Keras, OpenMP, CUDA, Stanford NLP, polyglot, NLTK, Latex, Docker
◇ Scripting: Bash, Matlab

References

◇ **Hamed Farbeh**, Assistant Professor — farbeh@aut.ac.ir
◇ **Mohammad Hadi Bokaei**, Assistant Professor — mh.bokaei@itrc.ac.ir

Exhaustive ver. of my CV, including other projects and extra-curricular activities, is available here.