Sina Mahdipour Saravani

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FIELDS OF INTEREST
- ◇ Natural Language Processing
- ◇ Deep Learning, Machine Learning
- ◇ Chat-bots, Text Generation, Question Answering

EDUCATION

University of Nevada, Las Vegas, Las Vegas, United States
- ◇ Ph.D. Computer Science, In Progress — 2019 - 2025
  - Cumulative Grade Average: **4**

Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran
- ◇ B.Sc. Computer Systems Architecture, (Ranked 174 top Computer Science Universities in the World) — 2014 - 2019
  - Cumulative Grade Average: **3.31**
  - Upper-Division GPA: **3.63**

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

RESEARCH AND WORK EXPERIENCE
- ◇ **Graduate Assistant, University of Nevada, Las Vegas** — 2019 - 2020
  - Supervisor: Dr. Kazem Taghva
  - Natural Language Processing; Currently working on Named Entity Recognition for Persian, and Sentence Matching for English.
- ◇ **Research Assistant and AI Developer, CommentMiner, Tehran, Iran** — 2017 - 2018
  - Supervisor: Mr. Asadi,
  - CommentMiner is a start-up working on a set of text processing services and intelligent chat bots. Tasks included: working on topic classification, profanity detection, NER, sentiment analysis.

TEACHING EXPERIENCE

Data Mining, *Teacher Assistant* — Spring 2020
- ◇ **University of Nevada, Las Vegas**
  instructor: Dr. Kazem Taghva

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

HONORS AND AWARDS
- ◇ **Top 50 start-ups** in GITEX, Dubai (CommentMiner) — 2017
- ◇ **3rd place** in ElecomStars, Tehran (CommentMiner) — 2017
- ◇ **1st place** in Sharif VC Cup, Tehran (CommentMiner) — 2017
- ◇ Certificate of Attendance at **Deep Learning Summer School** — 2018
  Association for Computing Machinery (ACM) of University of Tehran
- ◇ Member of **Scientific Association and Olympiad Affairs** — 2015
  Amirkabir University of Technology
- ◇ Ranked top **0.2**% in University Entrance Nationwide Exam - Math. and Physics — 2014
  Among approximately **230000** applicants, Iran

◇ Ranked top **0.09**% in University Entrance Nationwide Exam - Foreign Languages 2014
Among approximately **129000** applicants, Iran

Lectures and Presentations

◇ Presentation on GAN June 2018
Department of Biomedical Engineering, Amirkabir University of Technology
- 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 July 2018
Department of Mathematics and Computer Science, Amirkabir University of Technology
- 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 January 2017
Department of Computer Engineering, Amirkabir University of Technology
- 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

◇ **Implementation of a Convolutional and a Pooling Layer of a CNN on FPGA**, Amirkabir University of Technology
Implemented the convolutional and the max pooling functions of CNN's using Xilinx Vivado High-Level Synthesis and ran this project on a ZYBO SoC board. This design acheived up to 30 times faster throughput relative to the software code on a CPU

◇ **Activity Recognition with Wearable Sensor Dataset in Spark Platform**, University of Nevada, Las Vegas
Implemented scalable classification solutions (Multilayer Perceptron Network, Logistic Regression, and Decision Tree) using Spark libraries for motion data of elderly people in a room, (Python, Spark)

◇ **Multithreaded Persian Short-Text Classification**, CommentMiner
Implemented using two different algorithms: Max Entropy and Naive Bayes to classify Persian comments and short messages, (Java)

◇ **Telegram Chat-bot for Automatic Question Answering**, CommentMiner
Implemented a Telegram automatic bot using indexing and similarity checking on: Who Is Hosting Who FAQ and on Question-Answer Jokes, (C#)

◇ **Coin Image Template Matching**, Amirkabir University of Technology
Implemented using OpenMP and CUDA platforms to parallelize the matching algorithm and to enhance the performance on GPU and CPU, (C, C++)

◇ **Hand-written Digit Image Generation**, Amirkabir University of Technology
Implemented using a Generative Adversarial Network on MNIST dataset to generate new unseen digit images, (Python Keras package)

Relevant Skills

◇ Programming: Java, Python, C/C#, VHDL, Verilog, Assembly
◇ Tools and Frameworks: TensorFlow, MALLET, Keras, OpenMP, CUDA, Stanford NLP, polyglot, NLTK, Latex, Docker
◇ Web Programming: Familiar with HTML, CSS, JavaScript, JQuery, NodeJS
◇ Circuits, Simulation and Engineering Software: Matlab, PSpice, HSpice, Xilinx ISE, Model Sim SE, Xilinx Vivado, Altium Designer, CodeVision, Atmel Studio, Proteus
◇ Scripting: Bash, Matlab
◇ Others: Adobe InDesign, Adobe Photoshop, Microsoft Word, Microsoft Excel, Microsoft PowerPoint

References

◇ **Reza Safabakhsh**, Professor safa@aut.ac.ir
◇ **Hamed Farbeh**, Assistant Professor farbeh@aut.ac.ir