### Sina Mahdipour Saravani

| CONTACT                         | E-mail: mahdipou@unlv.nevada.edu Homepage: sinamahdipour.github.io   |
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| FIELDS OF<br>INTEREST           | <ul> <li>♦ Natural Language Processing</li> <li>♦ Deep Learning, Machine Learning</li> <li>Chat-bots, Text Generation, Question Answering</li> </ul>   |
| EDUCATION                       | University of Nevada, Las Vegas, Las Vegas, United States  > Ph.D. Computer Science, 2019 - 2025 In Progress  • 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)  Cumulative Grade Average: 3.31  Upper-Division GPA: 3.63   |
|                                 | Samii High School, Rasht, Iran  ♦ Diploma in Physics and Mathematics Discipline  • Cumulative Grade Average: 20/20   |
| RESEARCH AND<br>WORK EXPERIENCE | <ul> <li>Graduate Assistant (Research), 2019, University of Nevada, Las Vegas</li> <li>Supervisor: Dr. Kazem Taghva</li> <li>Natural Language Processing; Currently working on Named Entity Recognition for Persian, and Sentence Matching for English.</li> <li>Research Assistant and AI Developer, 2017-2018, CommentMiner, Tehran, Iran</li> <li>Supervisors: Mr. Asadi,</li> <li>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.</li> </ul> |
| TEACHING<br>EXPERIENCE          | University of Nevada, Las Vegas, Las Vegas, USA  ⋄ Teacher Assistant, Data Mining, taught by Dr. Kazem Taghva  Spring 2020   |
|                                 | Amirkabir University of Technology (Tehran Polytechnic), Tehran, Iran  ⋄ <i>Teacher Assistant</i> , Embedded & Real-Time Systems, taught by Dr. Hamed Farbeh  2018   |
| HONORS AND<br>AWARDS            | <ul> <li>Top 50 start-ups in GITEX, Dubai, 2017 (CommentMiner).</li> <li>Third place in ElecomStars, Tehran, 2017 (CommentMiner).</li> <li>First place in Sharif VC Cup, Sharif University of Technology, Tehran, 2017 (Comment-Miner).</li> <li>Certificate of Attendance at Deep Learning Summer School from Association for Computing Machinery (ACM) of University of Tehran, 2018.</li> </ul>   |

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. and in top 0.09% place (among 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

♦ 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.

♦ 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).

- ♦ Telegram Chat-bot for Automatic Question Answering, CommentMiner Implemented as a first model using indexing and similarity checking on: Who Is Hosting Who FAQ and on Question-Answer Jokes, (C#).
- ♦ **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 (Proficient), Python (Proficient), C/C#/C++ (Proficient)
- ♦ TOOLS AND FRAMEWORKS: TensorFlow, MALLET, Keras, OpenMP, CUDA, Stanford NLP, polyglot, NLTK, Latex, Docker
- ♦ SCRIPTING: Bash, Matlab

#### REFERENCES

- ♦ Kazem Taghva, Professor
- ♦ Reza Safabakhsh. Professor
- **♦ Hamed Farbeh.** Assistant Professor

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