## Sina Mahdipour Saravani

CONTACT E-mail: sinamahdipour@yahoo.com Homepage: sinamahdipour.github.io

## 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** (Calculated exactly as WES does)

• 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 (Comment-Miner).
- 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. 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

### ♦ 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).

♦ 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 (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.