# Alireza Torabian

in alireza-torabian

1997alireza

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1997alireza.github.io

#### RESEARCH INTERESTS

· Optimization

Adversarial Machine Learning

Machine Learning

· Deep Learning

#### **EDUCATION**

2015 - 2020

Bachelor of COMPUTER (Software) ENGINEERING, Amirkabir Univ. of Tech. (Tehran Polytechnic)

The Second Best Technical University in Iran

GPA: 3.9/4 (18.25/20) In the top 10% among 101 students

Thesis: Design and Implementation of an Automatic Question Answering System for Answering Simple

Persian Questions, Supervisor: Dr. Saeedeh Momtazi

2011 - 2015

Diploma in Physics and Mathematics Discipline, Allame Helli High School, Tehran

Affiliated with the National Organization for Development of Exceptional Talents (NODET)

GPA: 19.64/20

### RESEARCH AND WORK EXPERIENCES

Jul 2019 - Sep 2019

Research intern on the subject of Adversarial Machine Learning at National University of

Singapore. Under the supervision of Dr. Reza Shokri

Creating a black-box adversarial attack to fool face detection and face recognition models to impersonate

anyone. The attack model is tested with two face recognition tools (report).

Jul 2018 - Dec 2018

Research and Development intern in Developing Persian Question Answering System at

Diaaloa.

Developing a sequence-to-sequence system to generate answers according to the entrance questions. Clus-

tering methods and a sequence-to-sequence neural network are used in this project.

| Diaalog Company Page

Oct 2016 - Sep 2017

Member of S.O.S. vr Team, Research Assistant at Cognitive Robotics Laboratory, Amirkabir University of Technology, Tehran, Iran. Under the supervision of Dr. Saeed Shiry Ghidary

Developing an autonomous exploration for robots. | CR Laboratory Page

Sep 2016 - Jun 2017

Founder and Member of Dropout (F.K.A. Lost Soul), Android Game Developer Team

| Dropout CafeBazaar Page

#### TEACHING ASSISTANTSHIPS

Artificial Intelligence: Dr. Nickabadi Sep 2018 - Jan 2019 Data Structure and Algorithms: Dr. Bagheri Sep 2018 - Jan 2019 Principles of Computer and Programming: Dr. Shiry Ghidary Sep 2018 - Jan 2019 Artificial Intelligence: Dr. Nickabadi Feb 2018 - Jun 2018 Data Structure: Prof. Dehghan Takht Fooladi Sep 2017 - Jan 2018

#### Honors and Awards

- · Second Place in the Rescue Simulation Virtual Robot League as a member of SOSvr Team at RoboCup Nagoya, Japan, 2017 (scores - certificate)
- Ranked 2nd among all Software Engineering Students (-40), Class of 2015, Amirkabir University of Technology, Tehran, Iran, 2016

• Ranked top **0.5%** among **180,000** participants in the Nationwide Iranian University Entrance Exam in Math and Physics, **2015** 

#### **RELATED COURSES**

Computer Science: Convex Optimization (graduate course), Linear Algebra, Foundations of Data Min-

ing, Artificial Intelligence, Signals and Systems, Design of Algorithms, Data Structures & Algorithms, Advanced Computer Programming, Principles of Computer &

Programming

Mathematics: Linear Algebra, Stochastic Processes, Game Theory (Topics in Mathematics & Its Ap-

plications), Engineering Mathematics, Engineering Statistics, Differential Equations,

Discrete Mathematics, Calculus II, Calculus I

#### COMPUTER SKILLS

Languages: C++, Java, Python, Go

Frameworks and Tools: Tensorflow (Python & JS), Numpy

Database Tools: MySQL, SPARQL, MongoDB

Web Programming: HTML, CSS, JavaScript, jQuery, Express.js, PHP

## NOTABLE PROJECTS

• Optimization Course Homeworks, Line Search methods, Trust Region methods, Inequality constrained minimization, 2019

- Data Mining Course Homeworks, Non-linear Regression, KNN model, Decision Tree, A-Priori Algorithm, Linear SVM, SVM using Kernel, Feedforward Neural Network, 2019
- RNN Language Model, Character sequence prediction using RNN, 2018
- QA Clustering, Clustering the answers based on the sentences, 2018
- · Classical Search and Local Search algorithms, AI Course Project, 2017

## LANGUAGES

PERSIAN: Native

ENGLISH: Fluent

TOEFL iBT Score: 91 (Reading: 27, Listening: 23, Speaking: 21, Writing: 20)

GRE Score: Quantitative Reasoning: 166, Verbal Reasoning: 140, Analytical Writing: 3.0

#### REFERENCES

- Saeedeh Momtazi, My Thesis Supervisor, Assistant Professor, Amirkabir University of Technology momtazi@aut.ac.ir
- Reza Shokri, My Internship Mentor, Assistant Professor, National University of Singapore reza@comp.nus.edu.sg
- Ahmad Nickabadi, My Teaching Supervisor, Assistant Professor, Amirkabir University of Technology nickabadi@aut.ac.ir

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