Alireza Torabian

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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

Diaalog,

 $Developing\ a\ sequence-to-sequence\ system\ to\ generate\ answers\ according\ to\ the\ entrance\ questions.\ Clussian and the sequence of the contractions of the entrance of the system of the entrance of$

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

| 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

Data Structure and Algorithms: Dr. Bagheri

Principles of Computer and Programming: Dr. Shiry Ghidary

Artificial Intelligence: Dr. Nickabadi

Data Structure: Prof. Dehghan Takht Fooladi

Sep 2018 – Jan 2019

Feb 2018 – Jun 2018

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 (~100), 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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