

Alireza TORABIAN

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RESEARCH INTERESTS

- Adversarial Machine Learning
- Machine Learning
- Convex Optimization
- Data Mining

EDUCATION

2015 - now	Bachelor of COMPUTER Engineering, Amirkabir University of Technology (Tehran Polytechnic) <i>Ranked 100 in the world by subject of Engineering</i> GPA: 3.9/4 (18.26/20) for 128 units until now
2011 - 2015	Diploma in PHYSICS AND MATHEMATICS DISCIPLINE, Allame Helli High School , Tehran <i>Ranked 1 in Iran</i> GPA: 19.39/20

RESEARCH AND WORK EXPERIENCES

Jul 2019 - Sep 2019	Research intern on the subject of Adversarial Machine Learning at National University of Singapore , Creating a black-box adversarial attack to fool face detection and face recognition models to impersonate anyone. Under supervision of Dr. Reza Shokri
Jul 2018 - Dec 2018	Research and Development Intern in Developing Persian Question Answering System at <i>Diaalog</i> , Developing a sequence-to-sequence model to generate answers according to the entrance questions. 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 Developing an autonomous exploration for robots. Under supervision of Dr. Saeed Shiry Ghidary CR Laboratory Page
Sep 2016 - Jun 2017	Founder and Member of Dropout (F.K.A. Lost Soul), Android Game Developer Team Dropout CafeBazaar Page

PUBLICATIONS AND TECHNICAL REPORTS

- M. Ahmadi, Mh. GohariNejad, **Ar. Torabian**. SOSrs Rescue Simulation Virtual Robot **Team Description Paper** 2018. International **RoboCup** Competition, Rescue Simulation Virtual Robot League, **Montreal, Canada Jun 2018** [| Download PDF](#)
- **Ar. Torabian**, A. Gholami, A. Beheshti, N. Karaminejad, A. Rashidbeigi, A. Dizani. **A Deep Analysis of Ethical Dilemmas in Computer Engineering**. Faculty of Computer Engineering, Amirkabir University of Technology, Tehran, Iran, Engineering Ethics Final Project Report **Dec 2017** [| Download PDF](#)
- **Ar. Torabian**, Mh. GohariNejad, M. Ahmadi, S. Azami, S. Shiry. SOSvr Rescue Simulation Virtual Robot **Team Description Paper** 2017. International RoboCup **IranOpen** Competition, Rescue Simulation Virtual Robot League, **Tehran, Iran Mar 2017**

LECTURES AND VOLUNTEER WORKS

- **Presentation on Towards Deep Learning Models Resistant to Adversarial Attacks** Jun 2019
How to make a robust model to adversarial attacks?
Based on "Towards Deep Learning Models Resistant to Adversarial Attacks" paper.
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[| Referenced](#) [Paper](#)
- **Review of Membership Inference Attacks Against Machine Learning Models** Apr 2019
How to keep privacy in machine learning models?
Based on "Membership Inference Attacks against Machine Learning Model" paper.
[| Download](#) [Review](#)
[| Referenced](#) [Paper](#)
- **Presentation on Question Answering Systems** Dec 2018
What are the QA systems and why we need them and how to implement them?
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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 alongside SOSvr Team at **Robocup Nagoya, Japan, 2017**
- Ranked **2nd** among all Software Engineering Students, Class of 2015, Amirkabir University of Technology, Tehran, Iran, **2016**
- Ranked **524th** among **180,000** Participants in the Nationwide Iranian University Entrance Exam in Math and Physics, **2015**
- **Qualified** for the Second Round of the **Iranian Mathematical Olympiad**, Iran, **2013**
- **Accepted** in **NODET High School** Entrance Exam, National Organization for Development of Exceptional Talents, **Allame Helli**, Tehran, Iran **2011**

COMPUTER SKILLS

Languages:	C++, Java, Python , Go, VHDL, Verilog, AVR Assembly
Frameworks and Tools:	Tensorflow, Numpy, Gensim , Scikit, Pandas, Lucene, NLTK
Databases:	MySQL , SPARQL, MongoDB
Web Programming:	HTML, CSS, JavaScript , jQuery, React, Express.js, PHP
Application Development:	Android, ReactNative
Operating Systems:	Linux(Ubuntu), Mac OS, Windows

NOTABLE PROJECTS

- [Optimization Course Homeworks](#), *Line Search methods, Trust Region methods*, 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](#), *Word sequence prediction using RNN*, 2018
- [QA Clustering](#), *Clustering the answers by some methods*, 2018
- [NUMEX Interpreter](#), *An interpreter using functional language named Racket*, 2018
- [C to SAYEH Compiler](#), *A compiler for SAYEH processor*, 2017
- [Classical Search](#) and [Local Search](#) algorithms, *AI Course Project*, 2017
- [Search Engine](#), *Data Structure Course Project by Java, implementation of BST, AVL (Balanced BST), TST, Balanced TST, Trie and HashMap using chaining approach based on LinkedList*, 2016
- [Pacman](#) Game, *Advanced Programming Course Project by Java*, 2016

LANGUAGES

PERSIAN: Native

ENGLISH: Fair

REFERENCES

Saeedeh Momtazi ,	Assistant Professor	Email: momtazi@aut.ac.ir
Ahmad Nickabadi ,	Assistant Professor	Email: nickabadi@aut.ac.ir
Saeed Shiry Ghidary ,	Assistant Professor	Email: shiry@aut.ac.ir

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