

# Alireza TORABIAN

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## RESEARCH INTERESTS

- Optimization
- Adversarial Machine Learning
- Machine Learning
- Deep Learning

## EDUCATION

2015 - now	<p>Bachelor of COMPUTER (Software) ENGINEERING, Amirkabir Univ. of Tech. (Tehran Polytechnic) <i>The Second Best Technical University in Iran</i> GPA: <b>3.91/4 (18.31/20)</b> for 134/140 units until now <i>In the top 10% among 101 students</i> <b>Thesis:</b> Design and Implementation of an Automatic Question Answering System for Answering Simple Persian Questions, Supervisor: <a href="#">Dr. Saeedeh Momtazi</a></p>
2011 - 2015	<p>Diploma in PHYSICS AND MATHEMATICS DISCIPLINE, Allame Helli High School, Tehran <i>Affiliated with the National Organization for Development of Exceptional Talents (NODET)</i> GPA: <b>19.64/20</b></p>

## RESEARCH AND WORK EXPERIENCES

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

## TEACHING ASSISTANTSHIPS

Artificial Intelligence: <a href="#">Dr. Nickabadi</a>	Sep 2018 – Jan 2019
Data Structure and Algorithms: <a href="#">Dr. Bagheri</a>	Sep 2018 – Jan 2019
Principles of Computer and Programming: <a href="#">Dr. Shiry Ghidary</a>	Sep 2018 – Jan 2019
Artificial Intelligence: <a href="#">Dr. Nickabadi</a>	Feb 2018 – Jun 2018
Data Structure: <a href="#">Prof. Dehghan Takht Fooladi</a>	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, 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

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Computer Science:	<b>Convex Optimization (graduate course)</b> , Linear Algebra, Foundations of Data Mining, 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 Applications), Engineering Mathematics, Engineering Statistics, Differential Equations, Discrete Mathematics, Calculus II, Calculus I

## COMPUTER SKILLS

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Languages:	<b>C++, Java, Python, Go</b>
Frameworks and Tools:	<b>Tensorflow</b> (Python & JS), <b>Numpy</b>
Database Tools:	<b>MySQL</b> , SPARQL, MongoDB
Web Programming:	HTML, CSS, <b>JavaScript</b> , jQuery, Express.js, PHP

## NOTABLE PROJECTS

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- [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

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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

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- [Saeedeh Momtazi](#), Assistant Professor, Amirkabir University of Technology  
[montazi@aut.ac.ir](mailto:montazi@aut.ac.ir)
- [Reza Shokri](#), Assistant Professor, National University of Singapore  
[reza@comp.nus.edu.sg](mailto:reza@comp.nus.edu.sg)
- [Ahmad Nickabadi](#), Assistant Professor, Amirkabir University of Technology  
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