

Mahdi Sadeghzadeh Ghamsary

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Contact

Information

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Work Interests

◦ Data Science and Engineering ◦ Back-End Development ◦ Product Management

Research Interests

◦ Machine Learning ◦ Optimization Methods ◦ Explainable Neural Networks
◦ Reinforcement Learning

Education

• **Amirkabir University of Technology**, (Tehran Polytechnic), Tehran, Iran

B.Sc., **Computer Engineering**

Sep. 2017 – May 2021 (expected)

Passed Units: 48/140 credits

GPA: 15.4/20.00

• **Allameh Helli 10 High School**, Tehran, Iran

Diploma, Mathematics and Physics Discipline

Sep. 2013 – Jun. 2017

National Organization for Development of Exceptional Talents (NODET)

CGPA: 19.45/20.00

Technical

Skills

Programming Languages:

◦ Proficient: Python, C/C++, Java.

◦ Familiar: Scala.

Web Development: Django, NodeJS, JQuery, CSS, HTML.

Database: SQLite, PostgreSQL.

Tools/Framework: Tensorflow and Keras.

Operation Systems: Linux, MacOS, Windows.

Textsetting: L^AT_EX, MS Word.

Scripting: Bash.

Work Experience

• **Oloome Sabz**, Machine Learning Researcher

Sep. 2018 – Feb. 2019

Research about Intrusion Detection Systems (IDS) to add the use of Machine learning methods for detecting more complex anomalies alongside a rule-based approach. Was working on the feasibility of the project by dividing it into two phases and trying to find point-anomalies for the first one.

• **IUST Aerospace Research Center**, Software Engineer

Sep. 2018 – Jan. 2019

Setting up and Deploying a GitLab local server, Teaching git structure and commands using Pro Git book

Notable Projects

◦ **Unsupervised Anomaly Detection on Network connection logs – Oloome Sabz**

Sep. 2018 – now

A system that oversees all connections of a network (e.g. a company internal network) and is able to detect advanced persistent threats (APT). currently working on its first phase to detect point-anomalies. and in the second phase will be trying to detect contextual-anomalies. [Link to Github](#)

◦ **Unsupervised Image Plate Recognition**

Dec. 2018 – May 2019

An automated plate recognition algorithm implemented using Keras and OpenCV to recognize both Iranian and International truck plates in one of the Iran customs (Bashmagh). [Link to Github](#)

	<ul style="list-style-type: none"> ◦ Scraping AUT-Portal and Bypassing Captcha <i>Sep. 2018</i> A scraper on portal.aut.ac.ir that bypasses the captcha, logins and then selects the given courses. The captcha bypass uses a trained model with a dataset of captchas and labels. Link to Github ◦ Neural Network Maker <i>Dec. 2018</i> A simple python framework to make and learn neural networks that uses perceptrons to create a neural network and implements forward and backward propagation procedures using the Chain rule instead of Matrix-based approach to learn the network. Link to Github ◦ Minux <i>Jan. 2019 – now</i> Minux is a recommender system that creates an optimized kernel according to the users hardware configuration, for providing better performance. Currently studying to match kernel requests to memory specifications. Link to Github ◦ Stock Simulator <i>Nov. 2018 – now</i> Stock Simulator is a Django application that gets data of Stock daily and apply some indicators on these data to help users for better trading. Link to Github
Certifications	<ul style="list-style-type: none"> • Deep Learning Summer School – University of Tehran (certificate) • Django Learning Course – Amirkabir University of Technology (certificate)
Online Courses	<ul style="list-style-type: none"> • Machine Learning by Stanford University, 2011, Andrew Ng on <i>Coursera</i> • Convolutional Neural Networks for Visual Recognition (CS231n) by Stanford University, 2016, Fei-Fei Li-Andrej Karpathy-Justin Johnson on <i>youtube and course website</i>
Honors and Awards	<ul style="list-style-type: none"> • Achieved top 0.25% place among 137,788 applicants for The University Nationwide Entrance Exam Mathematics and Physics. <i>Iran 2017</i> • Participant in the 8th RoboCup Iran Open competitions in Junior Rescuer Robots part (<i>The RoboCup IranOpen 2013</i>).
Languages	<ul style="list-style-type: none"> • Persian: Mother tongue (native). • English: Familiar.
Additional Activities	<ul style="list-style-type: none"> • Chief of Public Relation and Industry Communications of the Students' Scientific Association of Computer Engineering and IT Department (Elected by the vote of the students), Amirkabir University of Technology, <i>Feb. 2019 – now</i>. • Technical Head of 6th Amirkabir Programming League at Computer Engineering and IT Department, Amirkabir University of Technology, <i>Mar. 2019</i>. • Cooperator in Data Mining Section of Samcode Competition in Allameh Helli 3 High School, <i>Dec. 2017</i>.
References	<ul style="list-style-type: none"> • Bahador Bakhshi Sareskanrood, Profossor Assistant, Computer Eng. and IT (CEIT) Dept., Amirkabir Univ. of Tech. <ul style="list-style-type: none"> ◦ Email: : bbakhshi@aut.ac.ir • Naderi, Profossor Assistant in faculty of computer engineering department of Iran University of Science technology. <ul style="list-style-type: none"> ◦ Email: naderi@iust.ac.ir • Taha Yousefbeigi, CTO of Oloome Sabz. <ul style="list-style-type: none"> ◦ Cell: +98 912 209 1353