

Mohammad Mahdi Maghouli

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Highlights

- Initiated, co-founded, and steered three ML-based startups in the domains of computer vision, algorithmic trading, and online education, from inception to market launch.
- Spearheaded the research, development and maintenance of ML-based startups for over five years, within the industrial sector.
- Team-Player with strong communication and leadership skills.
- Demonstrated expertise in AI and Machine Learning with a considerable publication record, including three publications, one currently under review and two in prep.

Education

Master of Science, Computing Science

University of Alberta, Edmonton AB

Sep. 2022 - Apr. 2023

Bachelor of Science, Computer Engineering

Shahid Beheshti University, Tehran, Iran

Sep. 2017 - Jan. 2021

Technical Skills

Programming / Scripting Python, Julia, Java, C++, C, SQL, Bash, HTML5/CSS/JavaScript, React

ML Toolkit Pytorch, Tensorflow, Numpy, Pandas, Sklearn

Cloud/MLOps AWS (EC2, S3, Sagemaker, Lambda), Docker

Database MySQL, PostgreSQL, MongoDB

Soft Skills Leadership, Team player, Agile Work, Lateral thinker, Responsible

Relevant Experiences

Co-Founder, Machine Learning Engineer

Chaos Company (Startup), Tehran, Iran

Jan. 2022 - Dec. 2022

- Spearheaded the development and implementation of a state-of-the-art portfolio management solution leveraging reinforcement learning methods for an algorithmic trading system

Co-Founder, Machine Learning Engineer

Astute Vision (Startup), London, United Kingdom

Apr. 2020 - Dec. 2022

- Leveraged meta-learning methodologies to design and implement a SOTA large scale object detection model that accurately classifies grocery items in grocery store shelf images with varying levels of imbalance
- Conceptualized, developed, and deploy a robust solution for extracting grocery store inventory using shelf images, making the store available online within a few minutes

Internship, Machine Learning Engineer

DigiKala-Next Winter AI Bootcamp, Tehran, Iran

Dec. 2019 - Feb. 2020

- Designed and developed an ensemble model utilizing Natural Language Processing (NLP) techniques to accurately detect fraudulent comments as part of an internship project

Co-Founder, CEO

MECH Group (Mofid Educational Collaboration Hub, Startup), Tehran, Iran

Nov. 2012 - Sep. 2016

- Conceptualized and Spearheaded the creation and deployment of an innovative online education platform for students at the middle and high school level

Publications

Maghouli, Mohammad Mahdi, Sarikonda, Jashwanth Reddy, Ardakanian, Omid. “HeteroFed: Heterogeneous Federated Learning with the help of Model Distillation,” *in press*.

Maghouli, Mohammad Mahdi, Al Omar, Abdullah, Choo, Euijin. “obMA: Obfuscated Malware Detection with Family Classification and image-based Correlation Investigation,” *in press*.

Maghouli, Mohammad Mahdi, et al. “Malfustection: Obfuscated Malware Detection and Malware Classification with Data Shortage by Combining Semi-Supervised and Contrastive Learning.” *arXiv preprint*, arXiv:2111.09975 (2022). [\[Link\]](#)

Awards and Honors

Sep. 2022	Scholarship: “University of Alberta Graduate Recruitment Scholarship ”	<i>Edmonton, AB</i>
Jun. 2021	Honorary Title: “Qualified for best CE Bachelor Thesis in spring semester 2021”	<i>SBU, Tehran</i>
Dec. 2020	Contest: Ranked 9th in “Rahnema-Collage’s ML Contest” among 703 contestants	<i>Tehran</i>
Nov. 2020	Contest: Third Prize in “DigiKala’s Fraud Detection Contest.”	<i>Tehran</i>
	Contest: Attained a remarkable distinction by securing a place among the Top	
Aug 2017	0.7% of 180,000 candidates in the Mathematics and Physics branch of the Nationwide Iranian University Entrance Exam.	<i>Tehran</i>

Community Engagement

Member at large

Universty of Alberta

CSGSA, Computing Science Department

Sep. 2022 - Present

- Supported fellow CSGSA team members by aiding in their duties, including event coordination and attending meetings on behalf of the organization.