# Mohammadhossein Malekpour

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#### RESEARCH INTEREST

Machine Learning, Deep Learning, NLP, Computer Vision, MLOps, Software Engineering, Big Data

#### EDUCATION

AmirKabir University of Technology (Tehran Polytechnic)

2017 - 2022

 $Bachelor\ of\ Science\ in\ Computer\ Science$ 

Last Two-Year GPA: 3.67/4

AmirKabir University of Technology (Tehran Polytechnic)

2021 - 2022 Overall GPA: 4/4

 $Minor\ in\ Economics$ 

#### Publications

## Optimizing concrete footings mixture with machine learning.

Sep 2022

Submitted at Journal of Materials in Civil Engineering (Under Review)

Second Author

## TEACHING EXPERIENCE

#### Teaching Assistant

Feb 2020 - Jan 2022

AmirKabir University of Technology

Tehran, Iran

- Machine Learning (MSc course) Dr. Mohammad Akbari
- Applied Data Science (MSc course at <u>TeIAS</u>) Dr. Amir Hesam Salavati
- Fundamentals of Programming in C Dr. Mohammad Akbari
- Principle of Software Design Dr. Amin Gheibi
- Advanced Programming in Python Dr. Morteza Kouhsar
- Advanced Programming in Python Dr. Javad Mohammadzadeh
- Principle of Software Design Dr. Javad Mohammadzadeh

## **Head Teaching Assistant**

Aug 2020 – Apr 2022

CS50x Iran

Tehran, Iran

• We taught CS50x in Iran, a Harvard course about introduction to computer science and the art of programming. I translated and customized CS50's original contents and taught the web track in CS50x 2020. Also, I held all TA sessions in CS50x 2021 and was the head teaching assistant of the CS50 web 2022 course.

#### Professional Experience

Data Analyst

June 2022 – Present

Divar

Tehran, Iran

- Divar is a classified ads and e-commerce online platform for users in Iran with 30 million monthly active users.
- Perform analysis on a wide variety of big data and process improvement opportunities; uncover trends, create and distribute various metrics, reports, dashboards, and building predictive models.

Data Science Intern

Sep 2020 – Nov 2020

Hesaba

Tehran, Iran

• The internship focused on principles of data science using R programming language and Tidyverse packages.

#### Python Developer Intern

Jun 2020 – Mar 2020

Segmentino

Tehran, Iran

- Segmentino is a marketing automation platform.
- Contributed to journey-designer product and developed some Python packages.
- I experienced working with Apache-Airflow, Docker, and modular programming in Python.

#### Software Engineer Intern

Jul 2019 - Sep 2019

Segmentino

Tehran, Iran

- I worked at the Iranian national observatory project's TDD (Technical Development Division).
- I experienced working with pure Python, MySQL, and Flask for the weather-station project.

#### Technical Skills

Languages: Python, R, SQL, C/C++, Bash

Frameworks: PyTorch, Spark MLib, Flask, FastAPI

**Developer Tools:** Git, Bash, Docker, VSCode, PyCharm, Metabase

Libraries: PySpark, Scikit-Learn, Pandas, NumPy, Seaborn, Plotly, Tidyverse

## Certifications

Deep Learning Specialization by Coursera (Offered by DeepLearning.AI), credential

AWS Machine Learning Foundations by Udacity, credential

Machine Learning by Coursera (Offered by Stanford University), *credential* 

Data Visualization by Kaggle, credential

R Programming Track by DataCamp, credential

Advanced Python Programming and OOP Thinking by Quera College, credential

Participant in CS50 for Educators Workshop 2021 by Harvard University, credential

CS50: Introduction to Computer Science by Harvard University, *credential* Participant in RoboCup IranOpen 2013 by RoboCup Federation, credential

## Selected Projects

#### AUT-Twitter-Analytics (GitHub) | Python, Scikit-Learn, Hazm, Streamlit, NLP Techniques

Jan 2021

• This project was an interactive dashboard based on user feedback on the product based on about 3.5 GB of Twitter data in Persian and English. I worked on EDA, building the dashboard, and integrating the models in production. Dashboard Features: Exploratory Data Analysis, Sentiment Analysis, and Topic Detection.

## Iran-Covid19 (GitHub) | R, Dplyr, Ggplot2

Nov 2020

• An R script, fetching daily covid19 data from Johns Hopkins University, presenting deaths, new cases, and recovered cases by plots in dashboard and time series.

## DailyDiet-API (GitHub) | Python, Flask, PostgreSQL, Heruku, Git

June 2020

• This project was a website that recommends daily meals or weekly diets based on users' health information and weight loss/gain goals. I participated in the back-end development with Flask and built the REST-API.

#### HIGHLIGHTED COURSES

• Advanced Programming in C++ • Data Structures & Algorithms • Design & Analysis of Algorithms • Principles of Operating Systems • Database • Data Mining • Probability • Foundation of Matrix and Linear Algebra • Introduction to Blockchain • NLP in Social Media • Linear Optimization • Artificial Intelligence • Econometrics • Game Theory

#### Languages

**Persian**: Native

English: Upper-Intermediate (TOEFL-IBT test date: 27 Nov 2022)

## References

Dr. Amin Gheibi

google scholar profile

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