

# Mohammadhossein Malekpour

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## RESEARCH INTEREST

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Machine Learning, Deep Learning, MLOps, Software Engineering, Parallel & Distributed Systems, Big Data

## EDUCATION

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**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  
*Minor in Economics* Overall GPA: 4/4

## PUBLICATIONS

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**Optimizing concrete footings mixture with machine learning.** Sep 2022  
*Submitted at Journal of Materials in Civil Engineering (Under Review)* Second Author

## TEACHING EXPERIENCE

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**Undergraduate 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 [TeIAS](#)) – 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

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**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  
*IPM Institute For Research In Fundamental Sciences* 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

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**Languages:** Python, R, SQL, C/C++, Bash  
**Frameworks:** PyTorch, Spark MLlib, Flask, FastAPI  
**Developer Tools:** Git, Bash, Docker, VSCode, PyCharm, Metabase  
**Libraries:** PySpark, Scikit-Learn, Pandas, NumPy, Seaborn, Plotly, Tidyverse

## CERTIFICATIONS

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**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

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- 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.
- (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, Heroku, 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

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• 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

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**Persian:** Native  
**English:** Upper-Intermediate (TOEFL-IBT test date: 8 Nov 2022)

## REFERENCES

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**Dr. Amin Gheibi** [amin.gheibi@aut.ac.ir](mailto:amin.gheibi@aut.ac.ir)  
*google scholar profile* *AmirKabir University of Technology*

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