# Mehrdad Sayad

Lover of AI, Coding, Mathematics and Algorithms

I am a Machine Learning Researcher with +5 years experience. I have been working on challenging and difficult NLP tasks with a higher level of abstraction. My background as a software engineer allows me to apply software development practices at ML-models, and my experience as a data scientist allows me to creatively visualize and tell stories about data.

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# **Research Projects**

Emotion Analysis On Customers Feedback Using GPT-3 — PR Department, Digikala, Tehran

Jan 2023 - June 2023

**Detection and Analysis Of Emotional Group Dynamic For** Iranian Users In Social Media During Covid Pandemic — 5th Ranked among the selected teams in the competitions under the supervision of the Cognitive Sciences & Technologies Council of Iran

Nov 2019 - May 2020

**Emotion Detection in Persian Text** — Accepted project in the the Cognitive Sciences & Technologies Council of Iran

Nov 2019 - May 2020

Brand Power Analysis On Social Media Platform — 3th Ranked among the selected teams in the competitions under the supervision of the Cognitive Sciences & Technologies Council of Iran

Jan 2019 - Mar 2019

Extract Attitude from Social Media — Accepted project in the the Cognitive Sciences & Technologies Council of Iran

Nov 2019 - May 2020

#### **SKILLS**

C++

Python

**Pytorch** 

Tensorflow

**SKLearn** 

Keras

Numpy

**Pandas** 

Scipy

**NLTK** 

Git

Gitlab

CI/CD

Linux

Docker

Proxmox

Redis

MongoDB

PostgreSQL

**MYSOL** 

Elasticsearch

#### **PUBLICATION**

# <u>Attitude Specific Hashtag Embedding</u> — *IKT* **2019**

#### **ACADEMIC-EXPERIENCES**

#### **SNL(Social Network Lab)**, Tehran —AI Researcher

Jan 2018 - Feb 2021

- Served as a teaching assistant, providing support and guidance to students in these courses.
  - Teaching Assistance for Advanced Algorithms , instructor: Dr.Faili, Fall 2018
  - Teaching Assistance for Social Networks , instructor: Dr.Asadpour, Fall 2018
  - Teaching Assistance for Social Networks , instructor: Dr.Asadpour, Fall 2019
  - Teaching Assistance for Natural Language Processing, instructor: Dr.Faili, Spring 2020
  - Teaching Assistance for Statistical Inference, instructor: Dr.Bahrak, Spring 2020
- Supervised an intern in the completion of his thesis("Retweet Graphs Embedding").

#### **CERTIFICATIONS**

Neural Networks
and Deep Learning
— deeplearning.ai
by Andrew Ng

Sep 2019

#### **LANGUAGES**

English, Professional Working Proficiency Persian, Native

#### **WORK-EXPERIENCES**

# **Kavosh**, Tehran, Iran — Senior Data Scientist/Engineer

Mar 2020 - Oct 2022

Accomplishments:

- Designed and developed data mining techniques for finding profitable opportunities, and as a result, we were able to find more profitable opportunities and increase our profit yield by nearly threefold.
- Built and trained an ML model to find optimal configurations for trading algorithms. This is extremely useful for fine-tuning and tuning parameters.
- Innovated new mathematical and strategic modeling in trading algorithms to keep them simple, general, and fast. As a result, we

- expanded our state space exponentially and increased our profit significantly.
- Significantly optimized trading system performance (increase of 100X in speed and near real-time at microseconds level) through improved software architecture design and parallelization techniques.
- Designed and built an integrated reporting platform to provide a clear visualization of algorithm performance based on our data, reducing the cost of monitoring for the entire support team.
- Led and mentored two interns to prepare them for their career journey.

### **HomaPlus**, Tehran — Back-End & Data Engineer

Sep 2018 - Feb 2021

Accomplishments:

- To manage and retrieve the collected data, we created a web service using Elasticsearch and Flask. Our customer had a better experience as a result of this REST Webservice.
- Utilized graph data structures with Neo4j to store and analyze social media data in order to find more insightful results for our complex analysis and visualization.
- Saved 20% of staff time by implementing automated report generation With python to streamline data analysis and reporting.
- Fostered a culture of test-driven development (TDD) and documentation throughout the development process to ensure code quality and maintainability.

# SNL(Social Network Lab), Tehran —AI Researcher

Jan 2018 - Feb 2021

Accomplishments:

- Pioneered the use of a deep learning-based emotion detection model for Persian contents on social media using Pytorch, Keras, and pretrained models (BERT) for analyzing pandemic social media data.
- Conducted research and developed an attitude detection model from text, utilizing hashtag embeddings via Pytorch, graph embedding, and knowledge graphs to detect changes in attitude in Twitter users before and after any events.
- Provided various data visualization techniques to effectively communicate research findings, allowing us to gain a better understanding of the data and present it in a more appealing manner.

- We placed fifth out of more than 50 teams in a competition hosted by the Cognitive Sciences & Technologies Council of Iran, where we presented a brand analysis on social media using text similarities, emotion detection, and attitude analysis.
- Presented a research work on the detection and analysis of emotional group dynamics for Iranian users on social media during the COVID-19 pandemic to the Cognitive Sciences & Technologies Council of Iran.

#### **EDUCATION**

**University Of Tehran**, Tehran — *Master*, *Computer Software Engineering* 

2017 - 2020

• Thesis: Attitude Detection From Social Media

**University Of Isfahan,** Isfahan — Bachelor, Computer Software Engineering

2011 - 2015

• Thesis: Distributed Warehouse Platform