

WORK EXPERIENCE

Data Scientist

ParticleB, Aug 2020–present

- ▶ **FIDIBO** Recommendation system (Iran's biggest digital platform of Ebooks, Audiobooks, and Podcasts):
 - ▶ Designed and developed a recommendation system to help **FIDIBO** users discover new and relevant items by providing personalized recommendations and similar items recommendations.
 - ▶ Performed comprehensive EDA to understand and summarize underlying data and give informative insights to business stakeholders using visualization and quantitative methods.
 - ▶ Built ETL pipelines to prepare required data for the recommendation engine such as users' historical interactions data (purchase, reading/listening, rating, and search) and items metadata.
 - ▶ Developed and evaluated various state-of-the-art recommendation approaches: content-based, collaborative filtering, graph-based, and sequence-aware recommender models.
 - ▶ Implemented offline evaluation dashboards to measure performance based on different metrics (e.g. NDCG, MAP, Diversity, etc.). Implemented prediction dashboards to see exactly what items are being served up by different methods alongside the list of items the user interacted with in the past.
 - ▶ Performed funnel analysis to trace how users interact through their journey on the application. Performed A/B tests to measure the effect of different recommendations on business metrics.
 - ▶ Developed a by-product service to assign a set of categories for a new item using NLP language models.
- ▶ Worked on different sections of an Algorithmic Trading System:
 - ▶ Portfolio management, Fund management, Order management, and Hyper-parameter optimization.

Python Developer (Data Science, Machine Learning, Web)

Freelancer, 2014–Aug 2020

- ▶ Designed and developed an AI-based song's vocal/instrumental separator web application.
 - ▶ It generates separation results in less than 40 secs (for songs < 5 mins) on Geforce 960m.
 - ▶ Technologies & Tools: Deep U-Nets, PyTorch, Flask, Django, PostgreSQL.
- ▶ Developed an intelligent organizational data analysis system.
 - ▶ It provides analytical insights about KPIs of an organization using AI algorithms.
 - ▶ Technologies & Tools: Python, Apache Kafka, Redis, gRPC, Protobuf, and Docker.
- ▶ Developed a web-based appointments scheduling, accounting, and management system.
 - ▶ Replaced traditional paper-based system and helped institute staff to efficiently manage 30000+ appointments, 7000+ transactions, and 3000+ clients during two years of launching.
 - ▶ Tech Stack: Django, MySQL, HTML, CSS, and JavaScript.
- ▶ Developed different AI based services using PyTorch:
 - ▶ Sentiment analysis service for Amazon customer reviews dataset (82.3% accuracy on test dataset).
 - ▶ Facial keypoint detection service to recognize location of 68 distinguishing keypoints.
 - ▶ Image captioning service using a Encoder(CNN)-Decoder(LSTM) network on MS COCO dataset.
 - ▶ Hourly energy consumption prediction service using GRU/LSTM networks.
- ▶ Developed a multi-label disaster response message classification web app for Figure Eight dataset.
 - ▶ Built ETL and NLP pipelines to classify a message for emergency workers.
- ▶ Developed a 2D Landmark Detection & Robot Tracking (SLAM) using Graph SLAM algorithm to create a map and locate landmarks of an environment using a self-driving car's sensors and motion data.

Full Stack PHP Developer

Freelancer, 2013–2014

- ▶ Developed first carpooling website in Iran 4paaye.ir (Winner of 8th Iranian Web and Mobile Festival).

C/C++ Developer

Kosaran Robotics Team, 2007–2011

- ▶ Developed C/C++ codes to program AVR Micro-controllers for rescue robots.

EDUCATION

M.Sc. in Computer Engineering

Shahid Rajaei University, 2015–2017

- ▶ GPA: 4.0/4.0 (19.34/20) · Ranked 1st among all M.Sc. students.

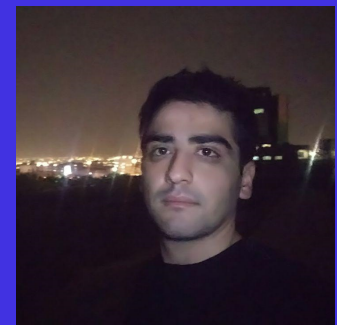
B.Sc. in Computer Engineering

Shahid Rajaei University, 2011–2015

- ▶ GPA: 3.96/4.0 (19.15/20) · Ranked 1st among all B.Sc. students.

PUBLICATIONS

- ▶ Sefidian, A.M., and Daneshpour, N. (2020). "Estimating missing data using novel correlation maximization based methods". *Applied Soft Computing*, 91, 106249.
- ▶ Sefidian, A.M., and Daneshpour, N. (2019). "Missing value imputation using a novel grey based fuzzy c-means, mutual information based feature selection, and regression model". *Expert Systems with Applications*, 115, 68-94.



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FIELDS

Machine Learning



Data Science



Deep Learning



PROGRAMMING LANGUAGES

Proficient in Python:

Machine Learning

Data Science

Web applications

Familiar with:

Java, C++/C, PHP,

WebDev (HTML, CSS, JS)

TOOLS

Apache Spark, Apache Kafka, Apache Airflow, Grafana, Git, Docker, LaTeX, Raspberry Pi

DATABASES

PostgreSQL, MySQL, Redis, Elasticsearch, MongoDB, InfluxDB

