Amin **Abbasi Shahkoo**

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I am a MSc student at the Machine Learning Lab under the supervision of Ahmad Ali Abin at the University of Shahid Beheshti, working on autonomous robots using deep reinforcement learning. Moreover, a backend developer who has worked for nearly four years. I enjoy analyzing and predicting data and turning any real problem into a problem that can be solved with machine learning methods.
I am currently working on an automated surgical robot and stock exchange data analysis.

Research Interests

Machine Learning

Reinforcement Learning

Data Analysis

Artificial intelligence in healthcare

Robotic Surgery

Recommender systems

Evolutionary Algorithms

Education

2018-10 - 2021-12 **M.Sc. in Artificial Intelligence And Robotics**

Shahid Beheshti University - Tehran, Iran

GPA: 17.78/20 (4/4)

2014-10 - 2018-10 **B.Sc. Computer Engineering**

Shiraz University - Shiraz, Iran

GPA : 15.32/20

Honors and Awards

Top Student in M.Sc.

- Ranked 3rd among all graduate peers in the field of Artificial Intelligence and Robotics at Shahid Beheshti University

M.Sc. Thesis

The surgical robot arm control using deep reinforcement learning

- superviser: Dr. Ahmad Ali Abin
- In this project, we are working on the arm of a surgical cutting robot. We present several approaches to the deep reinforcement learning agent that increase the accuracy of the agent during soft tissue cutting surgery.

Work History

2020-06 - Current   **Data Scientists and Python Developer (R&D)**
Arnika, Tehran, Iran

- At Arnika we worked in the financial markets forecasting and trading algorithms. In this project, future prices were predicted using machine learning methods such as deep neural network models and market news sentiment analysis. Also, an agent was trained using reinforcement learning that can trade automatically.

2017-11 - 2020-05   **Freelance**
Myself, Tehran, Iran

- web developer - python developer - socket programming - recommender systems

2017-07 - 2017-10   **PHP Developer**
Dideo, Tehran,Iran

- In Dideo we work with Laravel framework and design a webservice for playing video REST API

Teaching Experience

Pattern Recognition Teacher Assistant

- Shahid Beheshti University
- Spring 2019
- Dr. Ahmad Ali Abin

Data Mining Teacher Assistant

- Shahid Beheshti University
- Fall 2019
- Dr. Alireza Talebpour

Machine Learning Teacher Assistant

- Shahid Beheshti University
- Spring 2020
- Dr. Ahmad Ali Abin

Private Tutor

- **course titles :** python programming, java programming, c/c++ programming

Academic Projects

Sentiment analysis on Digikala dataset
A system for analyzing the opinions of online store (digikala) users, using LSTM and BERT.
(course: Natural Language Processing)

Control the timing of traffic lights according to intersection traffic
Time series detection using deep recurrent neural networks for better automatic timing of traffic lights intelligently.
(course: Neural Networks)

Fraud detection in financial transactions
Fraud detection system in bank financial transactions using HMM algorithm.
(course: Machine Learning)

Movie recommendation system
A system that recommended videos to a user according to the records laid down using machine learning techniques.

(course: pattern Recognition)

Constraint Clustering
Implement a variety of clustering methods with and without Constraint. (course: Pattern Recognition)
source

Fuzzy Constraint Clustering
Implementation of this paper.

(course: Fuzzy Systems)
source

Finding the optimal path using genetic algorithms
Implementation of a new crossover mechanism for genetic algorithms with variable-length chromosomes for path optimization problems.
(course: Evolutionary Algorithms)
source

Finding Job Position
A platform using php and laravel for find job accurding to skills and control of job advertisements by employers.

(B.Sc. Project supervised by Dr. Hooman tahayori)

MeetMe
A platform for finding the best time for people to meet and can be synced with Google Calendar.

Messenger and phonebook
Messenger software and desktop phonebook that can sync with contacts in your Google Account. Written using Java and JavaFX

(course: Database)

Newspaper Articles Recognizer
Image recognition of newspaper articles using *yolo* and *opencv* and conversion of each article image into text (OCR) for separation and analysis of news

Computer And Programming Skills

Coding Skills : Python , C , C++ , Java , PHP , JavaScripts , C# , Matlab, R (familar)

Frameworks : Laravel, Flask

Scientific and Deep Learning skills : scikit-learn , NumPy , Pandas , Keras , tensorflow, Pytorch (familar)

DBMS : MySQL, SQL Server, Redis

Other skills : git, Trello , Linux

Hobbies

- Volleyball
- Nature tourism
- Pool