# AMIRHOSEIN MOHAMMADI

MSc.Student- Artificial Intelligence

📍 Tehran-Iran

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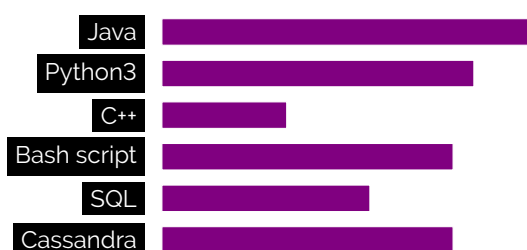
in AmirHosein Mohammadi

⌗ @amirhoseinMhmD

## ABOUT ME

I was born in 1998. I have been learning programming since 2012 (age 14). I first learned the C ++ language and got acquainted with this program for a year. Then I came across Java and gained a lot of experience in high school, such as Android programming. Then I pursued programming more seriously at university. During these years, I also did many projects with Python. I love to experience more and more as I can. You can find out this point in my resume and experiences. I'm like a plant and grow up every day if soil, water, and sunlight be occasion. On the other side enjoy fighting with problems like knights.
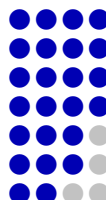
springBoot        Tensorflow        numPy

Java

Python3

C++

Bash script

SQL

Cassandra

## EDUCATION

**2021-until**

**Master of Science student, Artificial Intelligence**
Allame TabaTabaei University of Theran (ATU)
**Thesis (in progress):** Diagnosing psychological diseases by NLP models like BERT

**Neural Network** ●●●●
**NLP** ●●●●
**ML** ●●●●
**Graph Mining** ●●●●
**Expert Systems** ●●●○
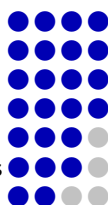**Advanced Algorithms** ●●●○
**Computational DM** ●●○○

**2016-2021**

**Bachelor's Degree of Computer Science**
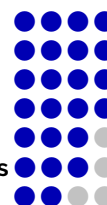Kharazmi University of Theran (KHU)
**Thesis:** Swarm intelligence optimization algorithm compare on traveling salesman

**Neural Network** ●●●●          **Neural Network** ●●●●
**NLP** ●●●●          **NLP** ●●●●
**ML** ●●●●          **ML** ●●●●
**Graph Mining** ●●●●          **Graph Mining** ●●●●
**Expert Systems** ●●●○          **Expert Systems** ●●●○
**Advanced Algorithms** ●●●○          **Advanced Algorithms** ●●●○
**Computational DM** ●●○○          **Computational DM** ●●○○

**2012 – 2016**

**Diploma**
Allame Helli high school of Theran (National Organization for Development of Exceptional Talents)
Graduate in Mathematics and Physics. Winning the title of the best idea in the third seminar of Allameh Helli High School. Executive secretary of the third seminar of high school.

## EXPERIENCE

**Mar-2021**
**Now**

**Big Data Engineer**
**Mahsan co.**
Developer of BigData department of Mahsan Company. Develope Data colletorand ETL by `Java,Python` and `Cassandra 3.11.2` and `Cassandra 4.0.1` with rate of millions of data per second . Design and develope data piplines by using activeMQ and Kafka. Experienced on using cloud object storages like openIO, minIO, and ceph. Deploy and maintenance several cassandra cluster in multi projects

**Mar-2020**
**Mar-2021**

**MicroService back-end developer**
**Tourism IT co.**
Design and develop digital banking service of TourismBank based on microservice architecture. Design Input and output gateway of the system with `Rest API` and inner communication with `gRPC`. Familiar with Banking service business and designing.

**Oct-2018**
**Jul-2019**

**Java-SE developer**
**TSIN co.**
Deisign and develope ETL to `Extract`,`Transfomr` and `Load` data from any usual sql database (even csv and files) to pracle data warehouse.

**Oct-2013**
**Feb-2015**

**Chief Executive Officer**
**3rd Seminar of Allame Helli High School**
Allame Helli holds a seminar yearly, where students present her achievement and creative design in plenty of fields. Students are responsible for the seminar and managers are chosen in voting. In the third seminar, I was the executive director and was in charge of issues related to the seminar. This was one of my first executive experiences in which we interacted with other schools in Tehran.

## PROJECT

Python — **Intent classification**
Implementation text intent classification by NLP method base on BERT

Python — **POS tagging task**
Invent new method for part of speech tagging based on swarm intelligence and heuristic algorithms

Python — **Classification task**
Implementation of classification methods like linear regression, BPNN, naive bayes testing Iris flower dataset

Python — **Simulated Annealing algorithm**
SA is a probabilistic algorithm which useing for optimization. It implemented on TSP datasets and general optimizing

Python — **Red Deer algorithm**
RDA is a swarm intelligence algorithm which useing for optimization. It implemented on TSP datasets

Python — **Firefly algorithm**
FA is a swarm intelligence algorithm which useing for optimization. It implemented on TSP datasets

Python — **Ant Colony algorithm**
ACO is a swarm intelligence algorithm which useing for optimization. It implemented on TSP datasets

Python — **Artificial Bee Colony algorithm**
ABC is a swarm intelligence algorithm which useing for optimization. It implemented on TSP datasets

Python — **CIFAR-10 Classification**
Classification on CIFAR-10 dataset with python and ipynb

| | | |
|---|---|---|
| Java | **Gain experience in Graphs** | |
| | Development Graph algorithms like Dijkstra, Belman-Ford, Floyd-Warshall, BFS, DFS, etc. | |
| Java | **Hafez Cryptography** | |
| | Development of a personal idea to encrypt messages with Hafez poems | |
| Java | **P2P data transfer** | |
| | Development peer-to-peer socket connection and use `packet` to transform and fetch data via ethernet | |
| C/C++ | **Banner grabbing** | |
| | Development of app that `nmap` and `netcat` to banner grabbing files of ip and collect data | |
| Java | **Swipe Brick Breaker** | |
| | Development of famous game Swipe Brick Breaker with `JavaFX` and `Swing`. | |
| Java | **Tic-Tac-Toe** | |
| | Development of famous game Tic-Tac-Toe with `JavaFX` and `Swing`. | |

## RESEARCH

**Swarm Intelligence algorithm**

Familiar with the concepts of heuristics algorithms, meta-heuristics, swarm intelligence, and approximation algorithms.
Has study experience in the field of swarm intelligence algorithms and optimization algorithms based on random processes.

**NLP POS-tagging by ACO**

POS-tagging(Part Of Speech) is a familar task in NLP. It's usual to use Markov chain to solve this problem. In this research tried to present new sufficient way for this task.

## LANGUAGES

**Persian** - native
**English** - upper-intermediate