Mohammad Hosein **Setak**

Computer Engineer

Address Tehran, Iran
WWW mhstk.github.io
Phone +989197722287
E-mail mh.setak38@gmail.com

I am a **hardworking** and passionate individual offering more than three years of experience as a programmer. I like to solve problems using creative thinking and **innovative solutions**. Pursuing a new position in **Master of Science in Computer Science** will be widely appreciated. I am a flexible and **fast-learner** person and always trying to learn new things and concepts. I quickly **master** new software packages and hardware technologies.

Education

2017-09 - Current — **Bachelor of Science: Computer Engineering**

Amirkabir University of Technology

- Last 2 year GPA: 17.42 out of 20

2013-09 - 2017-09 — **High School Diploma**

Nikan High School

- Overall GPA: 19.6 out of 20

Experience

2021-06 - Current — **Big Data Developer Intern**

Behsacorp, Tehran, Iran

- Worked with one of the largest datasets in the Middle East. Behsacorp uses Hamrahe Aval (A telecom company in the Middle East with more than 65 million subscribers)'s data, analyzes it, and gives feedback.
- We developed a royalty system for Hamrahe Aval to keep customers happy and loyal using Oracle Siebel.
- I was introduced to Apache Spark, Hive and still learning it.
- Used critical thinking to break down problems, evaluate solutions and make decisions.
- Worked effectively with multiple Scrum teams both internally and off-shore.

2020-05 - 2020-09 — **Developer**

Research Institute for Information and Communication Technology, Tehran, Iran

- Wrote maintainable, solid code for scraping news data for nearly 200 Persian news websites, running every hour to get the latest news and make them ready for NLP analysis.
- Wrote Facebook, Instagram crawlers to get the latest posts from specific users.

2019-05 - 2019-08 — **Freelancing Project**

WorldTrading, Tehran, Iran

- Developed an advertiser Twitter bot to advertise the company by reading the latest tweets and searching for specific keywords.
- Created a dashboard to fully control the bot and make it customizable with customer's needs.

Research Projects

Tehran, Iran

Amirkabir University of Technology

- Developed a compiler to compile a new simple programming language to C from given grammar in python. (Compiler-project)
- During my Artificial Intelligence course, I developed multiple projects which used Graph Searching Algorithms, NLP, CSP in python.
- Full-stack development of en E-shop website, React as front-end and Django as backend (Hojre e-shop website)
- During my Computational Intelligence course, I developed multiple neural networks, which learned games like Flappy Bird, and hand-written digits in python. (airplane-project) (hand-written recognition)
- As my final project for Information Retrieval Course created a simple search engine for Persian documents and a program to groups docs in a certain number of clusters using KNN, which were implemented in python. (IR-project)
- Developed a complete PI controller in ROS during my Robotics course, which travels inside a maze using python-rospy.
- Developed a download manager like IDM in Java. (JDM)
- Developed Normal Tanks in my second semester, which is a 2d multiplayer Java game as my Advanced Programming course's final project. (JTanks)

Nikan High School

- Created an attending system prototype for schools using the fingerprint of students in the first year of high school

2021-02 - 2021-05 — **Teaching Assistant**

Amirkabir University of Technology, Tehran, Tehran

- Microprocessor and Assembly Language Course
- Web Engineering Course

Honors and Awards

- Ranked in the **top 0.6%** in the Nationwide University Entrance Exam for B.Sc

Publications

I am currently doing research in the Viechle Routing Problem area, which has resulted in two papers until now. I'm assisting Sajad Hedayati, a Ph.D. student in Civil Engineering at Khajeh Nasir Toosi University. We use Adaptive search approaches to solve the problems. I'm responsible for coding and implementing algorithms (like SA, Genetics, Hill climbing, etc.) used in the papers.

Re-supplying mobile parcel lockers in last mile logistics (In progress)

- We study the generalized vehicle routing problem with multiple time windows for re-supply mobile parcel lockers at selected locations in a set of fixed routes where mobile parcel lockers are moving on these routes during the day. We first provide a mixed-integer linear programming formulation for the problem and propose an adaptive large neighbourhood search algorithm for solving large-sized instances.

Mixed-integer linear programming formulations for the clustered generalized vehicle routing problem (In progress)

- The clustered generalized vehicle routing problem (CGVRP) is an extension of the vehicle routing problem in which demand points are grouped into a number of distinct zones. These zones are further grouped into different clusters. The objective of the CGVRP is to find a set of routes that a fleet of vehicles starts at depot and visits exactly one node per zone in a manner that all zones in a cluster should be visited consecutively. This paper proposes three mixed-integer linear programming formulations. literature.

Skills

- Python
- Java
- Javascript
- Reactjs
- Docker
- SQL
- Hadoop
- Spark
- Creative
- Teamwork
- Responsible

Research Interests

- Artificial Intelligence & Machine Learning
- Data Science & Engineering
- Image Processing & Computer Vision
- Software Engineering
- Information Retrieval
- Distributed Systems