

Sahar Soheilian Esfahani . Jarvis Consulting

I have completed an MSc in computer engineering at Shahid Beheshti University in Iran. I am a performance-driven and result-oriented developer with more than five years of experience in designing databases and project management roles in automation projects (BPMS). I have expertise in leading engineering teams to achieve concrete goals on a strict deadline. I also have one year of working experience in developing backend components and implementing RESTful APIs in Django. Recently, I joined Jarvis as a software developer and implemented various applications such as a cluster monitoring agent app, Java grep app, Twitter app, and a stock trading app. I have strong skills in Java, SQL, Python, Django, and Docker. I also have working knowledge of UI development and front-end technologies. I am seeking to leverage my expertise and knowledge to work on challenging problems and enhance product capabilities.

Skills

Proficient: Java, Linux/Bash, RDBMS/SQL (MS-SQL/mysql/Postgres), Agile/Scrum, Git, BPMS, Docker, REST APIs, Postman

Competent: Python, Django, Springboot, Azure/GCP, C++, Microsoft Access, Microsoft Visio, Qt, Matlab

Familiar: React, HTML, CSS, JavaScript, Microsoft Windows Server

Jarvis Projects

Project source code: https://github.com/jarviscanada/jarvis_data_eng_SaharSoheilian

Cluster Monitor [GitHub]: Developed a bash monitoring agent that records hardware specifications of cluster nodes and monitors their resource usage in real-time in a Linux cluster of nodes/servers running CentOS 7 and internally connected through a switch. The application is utilized by the Linux Cluster Administration (LCA) team to have a better insight into servers, and their usage to meet the business requirements. Implemented in Bash scripts, and PostgreSQL. Used Docker and crontab for application deployment and Github for source code management.

Core Java Apps [GitHub]:

- **Twitter App:** Implemented a Java application using Twitter REST APIs and Http Client to allow users to 1) post a new tweet with a geotag, 2) search for a tweet by id and filter the response fields, 3) delete a list of Tweets by their ids. Designed the application based on MVC design pattern that has Models, Controller Layer, Service Layer, and Data Access Layer components. Used JUnit4 and Mockito to test the application and SpringBoot for dependency management. Represented tweet objects in JSON format using JSON library. Used docker to deploy the application, and Github to manage the source code.
- **JDBC App:** Designed a Java application that implements CRUD (create, read, update, delete) operations using JDBC API and DAO design pattern to access and manipulate data in a relational database. Implemented the application using Java and PostgreSQL, and used Github for source code management.
- **Grep App:** Developed an application that implements Linux grep usage in Java. The Grep application searches for a user-specified pattern in all the files of a given directory and outputs the matched lines into a file. Used Stream APIs and Lambda to improve the performance and enable the processing of big files. Dockerized the applications for easy deployment and used Github to manage the source code.

Springboot App [GitHub]: Developed a stock trading application in Java using REST API to allow users to manage client profiles and accounts (ex. create a new trader, deposit or withdraw fund to/from a trader account), and monitor trade securities (ex. get quotes). Designed the application based on MVC design pattern and used Springboot to fetch data from the IEX Cloud via its REST API. Persisted application data in PostgreSQL database and developed integration test cases using JUnit4. Dockerized the application and PostgreSQL database using a docker network for connection purposes. Used Github to manage the source code.

Python Data Analytics [GitHub]: Not Started

Hadoop [GitHub]: Not Started

Spark [GitHub]: Not Started

Cloud/DevOps [GitHub]: Not Started

Highlighted Projects

A new image aggregation solution for event detection in wireless visual sensor networks (WVSNs): Proposed a new image aggregation scheme in WVSNs. Designed a two-tier network architecture in which camera-equipped sensors with less energy are located in the lower tier to communicate with the environment. Used clustering and P2P frameworks to extract the data including the number and types of objects from the images (using the image filtering and processing methods) in a distributed in-network processing structure. Finally, sent back the fused scalar data to the base station. The results show that this new scheme can reduce the network traffic and communication energy consumption and hence, increase overall network lifetime.

Professional Experiences

Software Developer, Jarvis (2021-present): Worked on different projects and developed several applications by deploying technologies such as Java, Bash scripting, Postgres, Docker, Git, Maven, JUnit4, Mockito, Stream APIs, REST APIs, SpringBoot, and Spring framework: 1) Developed a monitoring agent for Linux cluster administrators using bash scripting to record the hardware specifications of each node and monitor node resource usages in real-time. 2) Implemented a Java application that imitates Linux grep command using Lambda and Stream APIs to allow users to search for a matching string in different files. 3) Designed a Java application that read, write, update, and deletes (CURD) data against an RDBMS database using JDBC API. 4) Developed a Twitter application that allows users to post, find and delete tweets using Twitter REST APIs. 5) Implemented a stock trading backend platform using Java and Springboot to allow users to manage client accounts and monitor the market.

Backend Developer, Bright Bee Technology Center Inc. (2020-2021): Implemented robust and performant backend components and RESTful APIs using Python, Django, and MySQL. Designed a smart system for engineers and non-engineers to enable them to make use of their data for their business growth by deploying simple and advanced modeling approaches in ML and AI. Collaborated with project managers, data scientists, and front-end developers to implement efficient solutions and develop RESTful APIs to support the platform's front-end. Created APIs to preprocess the data using Pandas/NumPy, and job schedulers to run APIs and store the results in the database asynchronously using Celery. Documented APIs for future use for efficient development.

Research Assistant, Qatar University (2019-2020): Collaborated with a research group on developing an interactive blood flow simulation pipeline. Designed a visualization platform using Qt for the blood flow simulation and modeling pipeline to provide an interactive environment for the users. Collaborated on developing a GPU-based rendering kernel to visualize HemeLB (a fluid solver written in C++) simulation results in real-time.

Project Manager and Database Designer, Payam Mashregh Company (2013-2018): Analyzed, evaluated, and documented user data and technical requirements to design and develop web forms, business workflows, and databases (the whole set of entities, relations, constraints, indexes, views, etc.). Supervised a team including technical consultants and workflow/web developers. Assessed and tested workflows on local and customer servers, identified bugs, and improved system features according to customer requirements quickly and effectively.

Education

University of Isfahan, Isfahan, Iran (2006-2010), Bachelor of Computer Engineering, Computer Engineering - GPA: 3.39/4.0

Shahid Beheshti University, Tehran, Iran (2011-2014), Master of Computer Engineering, Electrical and Computer Engineering - GPA: 3.72/4.0

Miscellaneous

- AZ-900: Microsoft Azure Fundamentals (2021)
- Udemy Python Django Dev To Deployment (2020)
- Yoga/Swimming
- Playing Santoor
- Camping
- Pottery