

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 5 years of experience in designing databases and project management 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 to support the platform's frontend. Recently, I joined Jarvis as a software developer and collaborated on various projects including but not limited to developing a cluster monitoring agent, Java grep app and Twitter app. I have strong skills in Java, SQL, Python, Django, docker and also working knowledge of UI development and frontend 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, Agile/Scrum, Git, BPMS, Docker, REST APIs, Postman

Competent: Python, Django, 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 which 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. The application is implemented in Bash scripts, SQL, and PostgreSQL. Used docker and crontab to deploy the application. Github was used 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. The application is implemented using MVC design pattern and consists of 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. The application is implemented in Java and PostgreSQL. Used Maven and slf4j for logging purposes. Github was used for source code management.
- **Grep App:** Developed a project that implements Linux grep usage in java. Java Grep application searches for a user-specified pattern in all the files of a given directory and outputs the matched lines into a file. The application is implemented in Java. Used Stream APIs and Lambda to improve the performance and enable processing of big files. Used docker to deploy the application, and Github to manage the source code.

Springboot App [GitHub]: Not Started

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 were located in the lower tier to communicate with the environment. In this scheme, clustering, as well as P2P frameworks, were used and the data including the number and types of objects were extracted from the images (using the image filtering and processing methods) in a distributed in-network processing structure. Finally, the fused

scalar data was sent back to the base station. The results showed 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 including Java, Bash scripting, Postgres, Docker, Git, Maven, slf4j, 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 app that imitates Linux grep command using Lambda and Stream APIs to allow users to search matching strings from files. 3) Designed a Java application that read, write, update, and deletes (CURD) data against an RDBMS database using JDBC. 4) Developed a Twitter application that allows users to post, find and delete tweets using Twitter REST APIs.

Backend Developer, Bright Bee Technology Center Inc. (2020-present): Implemented robust and performant backend components and RESTful APIs using Python, Django, and MySQL for a smart system designed for engineers and non-engineers, enabling them to make use of their data for their business growth by deploying simple and advanced modeling approaches in ML and AI.

Research Assistant, Qatar University (2019-2020): Collaborated with a research group on a project on the development of 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 (a traditional musical instrument)
- Camping
- Pottery