Ahmed Amer . Jarvis Consulting

Self-taught programmer with a degree in Neuroscience and an incredible passion for programming full-stack applications. After a well-thought-out decision to shift my career focus to software development, I accumulated 1+ years working within professional teams that employed agile software development principles in the development lifecycles of the product. Experience working with React and Tailwind CSS to build frontend, Java to build backend, and SQL to leverage PostgreSQL databases. Interested in a full-stack role under the mentorship of a team lead conducive to my passion for learning and growing both my technical and soft skills.

Skills

Proficient: Python, Java, SQL, JavaScript, HTML/CSS

Competent: Salesforce (Apex, Visualforce, LWC), Hadoop Ecosystem Tools (HDFS, MapReduce), PySpark ETL and Data Processing, Agile Software Development, Data Structures/Algorithms, Linux CLI and Bash

Familiar: React, Machine Learning Models, Tableau/Power BI, MongoDB, Maven

Jarvis Projects

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

Cluster Monitor [GitHub]: Designed and implemented a series of bash scripts that would monitor the usage data of a network of Linux machines and store that data within a relational database (PostgreSQL). Wrote a bash script to collect each terminal's usage data in intervals using the Linux shell and crontab. Developed a script to automate connecting to the database and inserting data. Also developed a script for the automation of starting/stopping the PostgreSQL docker container. The scripts were built and tested using a Rocky Linux 9 VM provisioned through the Google Cloud Platform.

Core Java Apps - Grep App [GitHub]: Designed and implemented a Java application that mimics the Linux CLI grep command - effectively searches for string matches in a file directory and returns the lines associated with the pattern. The app was implemented using the core Java Util as well as Java NIO library and Java Stream API. The app was developed, built, compiled, and packaged using Maven and a Docker image was built and distributed on Dockerhub. Testing with JUnit occurred when implementing a method for matching regex expressions to strings.

Core Java Apps - Stock Quote App [GitHub]: Developed an app with which users can fetch quotes from the Stock Market and purchase/sell shares. The app was built with Core Java 11 and Maven was used to manage dependencies. Notable libraries used: OkHttpClient for sending HTTP requests, Jackson Core library for parsing JSON data to Quote and Position objects. For testing, we used JUNIT5 to write testing methods and Mockito to mock objects during unit testing. The application was dockerized for ease of deployment and the user interface currently sits on the command-line interface.

Python Data Analytics [GitHub]: Built a local PostgreSQL data warehouse that housed historical retail data from our client, London Gift Shop. Connected to data warehouse and extracted data to 'pandas' dataframes using a psql driver. Performed data transformations, aggregations, and visualisations through the use of 'pandas' dataframes and 'matplotlib' library inside of a Jupyter Notebook. Supplemented code with detailed markdown cells that highlighted key steps and findings. Reported on the results of our analysis and our findings of RFM segmentation. Results showed key customer demographics and how LGS could increase their sales potential by tapping into these demographics.

Hadoop [GitHub]: Provisioned and configured a Hadoop cluster through Google Cloud Platform's Dataproc service. Performed ETL process on publicly available WDI data by leveraging cluster jobs using HiveQL. Analysed the benefits/tradeoffs of storage formats such as columnar vs textfile format, external vs HDFS tables, as well as various optimisation strategies such as partitioned tables. Monitored the progress of jobs, the status of resources and any error logs using YARN and Tez web interfaces. Reported on findings of differences in performance and optimal setups for big data processing with Hadoop clusters.

Spark [GitHub]: Leveraged an Apache Spark cluster through Azure Databricks. Completed ETL process for historical retail data from London Gift Shop. Performed data transformations, aggregations, and visualizations using PySpark/Scala in Databricks notebooks. Evaluated the benefits of Scala vs Spark from a performance standpoint. Provided a more scalable data architecture for future data analysis with much bigger data sets.

Salesforce [GitHub]: Leveraged Salesforce's Lightning Web Components and Lightning Data Service to build reusable web components that would be incorporated in a bear-tracking application for Ursus park. Used Salesforce's app UI for

adding and structuring components to the application's page. Built child components that would allow user-interaction to edit and view bear profiles within the park.

Highlighted Projects

React Website: Developed a web app with React. Styled the webpages responsively, and built styles with the use of custom CSS classes/root variables. Created custom React components such as an animated background hero, navbar, cards, and footer in a unique design for the web app.

React Daily Tasks App: Developed a simple, functional React web app for listing daily tasks and checking them off when they are completed. Wrote logic code in TypeScript for functions that implemented the CRUD operations of the app.

Professional Experiences

Software Developer, Jarvis (Sep 2024-present): Attended agile scrum meetings daily. Worked as part of a team of developers to write Linux bash scripts that monitored memory usage within a network of Linux machines. Wrote scripts that stored data in a PostgreSQL database in intervals of one minute. Developed and deployed (via docker) stock quote and grep Java applications as part of the SDLC of a trading platform. Performed data analytics on retail historical data using Python pandas/NumPy and presented findings on how to improve sales via Jupyter Notebook. Provisioned a Hadoop cluster to perform ETL and analysis of public WDI data. Performed ETL process of data with PySpark.

Software Developer, Kambira (Dec 2023-May 2024): Worked hand-in-hand with the founding developers of the company to propel their vision forward as a member of a team. Built the front-end portion of the React.js web app using Tailwind/TypeScript according to designs conceptualized beforehand on Figma. Adjusted and added to designs for pages using Figma. Contributed to both logic and styling code, including buttons, alert messages, user information, and dropdown menus.

Application Editor, Top Offer (Nov 2020-Apr 2021): Edited the spelling, grammar, and contents of over 300 professional letters, emails, and applications to graduate programs across the country for international students. Communicated with cross-functional teams in order to ensure client needs were met on a timely basis. Met extreme deadlines in cases where last-minute edits were requested.

Education

University of Toronto (2015-2020), Honours Bachelor of Science, Neuroscience and Cell Biology - Workshops and Innovations Lead of NeuroTechUofT - Summer 2019 - Member of UofT Public Speaking Club - 2018/2019

Miscellaneous

- Data Science with Python - DataCamp (March 2022)
- Java Algorithms - LinkedIn (April 2024)
- Agile Software Development: Clean Code Practices - LinkedIn (November 2023)
- JavaScript Deep Dive - Scrimba (February 2024)
- Rec League Basketball
- Professional Musician - Live performances and studio recordings