# Habib Mohamed . Jarvis Consulting

I was exposed to software development for the first time in high school when I took a Java-centric computer science class for an elective. I really enjoyed the problem-solving involved as well as the multitude of solutions one could come up with to a given problem. This solidified my decision to take computer science at the University of Windsor. During my time as an undergraduate, I gained various experiences including being a teaching assistant for courses on Linux and the Internet, successfully developing a mobile version of a web client as a co-op student, presiding over Unity/C# labs, and developing interfaces to upload gigabytes of medical data, as well query for data based on provided IDs as a research assistant. I graduated from the University of Windsor with distinction, obtaining a Honors Computer Science degree with software engineering specialization. I joined Jarvis as a data engineer, and am currently working on various projects. Some of the projects I have delivered includes a Linux cluster monitoring agent, a proof-of-concept trading system, and a command line Tweet interface, amongst others. I am looking to further my expertise as a developer in my next position, and hit the ground running in terms of contribution with the skills and experiences I have gained throughout my journey so far.

## Skills

**Proficient:** Java, Springboot, Python, Linux/Bash, RDBMS/SQL, Agile/Scrum, Git, Docker

**Competent:** Maven, Mockito, JUnit, Flutter, PHP, JavaScript, C/C++/C#

**Familiar:** Subversion, Jenkins, Node.js, React.js, Eclipse

## Jarvis Projects

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

**Cluster Monitor** [GitHub]: Utilizes Linux Bash, Postgresql, and Docker to build a monitoring agent that collects data on Linux machine specifications and performance in a cluster.

**Core Java Apps** [GitHub]:

- Twitter App: Incorporates Spring Boot, Maven, Docker, JUnit, Mockito and leverages the Twitter API in order to deliver a command line interface to create, read, and delete tweets, set up integration and unit tests, and deploy to DockerHub.
- JDBC App: Sets up data manipulation of a retail database using Java, Maven, Docker and Postgresql.
- Grep App: Pipelines information on a target directory for files and lines via Java 8 Streams, along with Docker and Maven for deployment, and JUnit for testing, in order to find a given regular expression.

**Springboot App** [GitHub]: Demonstrates a trading system Proof of Concept for stock traders based on a three-layer microservice architecture in order to move away from the monolithic architecture the legacy trading system was based on. Developed the system using Springboot, JUnit, and Mockito for coding and testing, Docker and Maven for packaging and deployment, and REST API endpoints that allow for the system to handle HTTP requests/send out HTTP responses accordingly.

**Python Data Analytics** [GitHub]: Analyzes retail data collected from a retailer's store and stored within an OLTP-database (Azure SQL Server), which the retailer via ETL generates a sql file. Stores the data from the sql file into an OLAP-database, Postgresql in this case, and is accessed from Jupyter Notebook, subjects the database to a couple of complex queries answering business questions, and grabbing the statistics and graphs for the data via Pandas and MathPlotLib. A RFM Segmentation table is also generated.

**Hadoop** [GitHub]: To be implemented.

**Spark** [GitHub]: To be implemented

**Cloud/DevOps** [GitHub]: To be implemented

## Highlighted Projects

**TSVtoMySQL** [GitHub]: Automates the process of inserting data within a TSV/CSV file into a MYSQL database using Springboot. Allows for less time spent on inserting large files of data (gigabytes) as opposed to converting the CSV/TSV files into multiple SQL files and running them manually.

**Department Wars** [GitHub]: Demonstrates the concept of routing and redux in React.js through a game that changes a department's mood based on the actions of another department. Meant to be a light exercise in visualizing the idea behind the often unintuitive coecpts of routing and redux.

## Professional Experiences

**Data Engineer, Jarvis (2020-present)**: Progressed through various projects and requirements using Java 8, Spring Boot, Linux, Git, Python, Docker, and other software. Utilized communication methodology and tools such as Agile Scrum and Zoom. Conducted daily scrum sessions as team leader.

**Research Assistant, Department of Computer Science, University of Windsor (2019-2020)**: Manipulated gigabytes of data in TSV/CSV format into being inserted in MySQL databases using PHP, JavaScript, and HTML/CSS/BootStrap. Communicated with clients on interface specifications and design, as well additional additions.

**Teaching Assistant, University of Windsor (2017-2020)**: Administrated classes over 100 students by grading, evaluating, and tutoring on concepts such as Linux and Internet fundamentals.

**Lab Manager, University of Windsor (2019)**: Orchestrated weekly lab sessions on game development in Unity and C#. Presided over student grading for major projects, as well as lab curriculum.

**Youth Green Co-op Student, Progressive Software International (2018)**: Spearheaded the initiative to develop a mobile version of the web client. Utilized JavaScript, HTML/CSS, BootStrap and SQL to get the job done. Presented the finished project at a company-wide meeting.

**Web Manager, University of Windsor's Muslim Student Association (2017-2018)**: Directed the UWMSA's website in showcasing daily and upcoming events using Wordpress. Incorporated widgets to automate some daily tasks, seeing a boost in traffic as a result.

## Education

**University of Windsor (2017-2020)**, Bachelor of Science (Honors), Computer Science - Graduated with distinction - Dean's List (2018-2020) - GPA: 3.7

## Miscellaneous

- Reading (favorite topics: history, innovation, technology)
- Playing sports (community soccer, basketball)
- Cryptocurrency investment (ADA, XLM)