

# Minh Phuong Ly . Jarvis Consulting

Being impassioned in exploring and experiencing new technologies, I got my bachelor's degree in Communication and Computer Network and have one year of experience as an IT Operation Specialist at ILA English Language Center. With the desire to explore something more challenging, I decided to take a Computer Software and Database Development program in Canada. During school, I had a chance to be part of the school's student research team and then had a Co-op term as a full-stack web developer at ASA Energy Consulting.

After graduating, I have joined Jarvis and since then, collaborating with team members in an Agile/Scrum environment is now comfortable to me. Besides, I have acquired precious knowledge by working on many projects using valuable technologies such as Linux/Bash, PostgreSQL, Docker, Maven, etc. I now have knowledge and experience in operating systems, computer networking, and software programming. Applying my knowledge to solve real-world problems is what inspires and motivates me to move forward in my career.

## Skills

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

**Competent:** GitFlow, Flask, JavaScript ES6/JQuery, HTML/CSS, DynamoDB/NoSQL

**Familiar:** AWS, Bootstrap, React.js, Docker/VMWare, Zeppelin/Hive/Hadoop, Maven, Junit/Mockito, Node.js, Socket.io, C++

## Jarvis Projects

Project source code: [https://github.com/jarviscanada/jarvis\\_data\\_eng\\_MinhPhuongly.git](https://github.com/jarviscanada/jarvis_data_eng_MinhPhuongly.git)

**Cluster Monitor** [GitHub]: Implemented a cluster monitoring system that helps to automatically collect hardware specifications from Centos servers every minute using Crontab and Bash scripts. The data then will be stored in PostgreSQL database provisioned using Docker for later querying to answer some business questions such as the amount of memory used of each server within 5 minutes interval and detect server failures. The PostgreSQL container also can be controlled by a bash script. We used Git as a version control system to manage the code and followed GitFlow branching strategy.

**Core Java Apps** [GitHub]:

- **Grep App:** a Java application that implements the use of grep command in Linux. It scans recursively files in a directory and then returns a sequence of strings that match the input pattern. The app can handle oversized files thanks to the help of Stream API. It was tested manually and then packaged into an uber jar file using Maven. The file was then used to create a Docker image and published to Docker Hub.
- **JDBC App:** a Java app that applied DAO pattern in using JDBC to create CRUD functions working with a dockerized Postgres Database. The project used Maven to manage the dependencies and IntelliJ for developing and testing.
- **Twitter App:** a Java app that applied the MVC model and DAO pattern into performing read, create and delete a Tweet using Twitter APIs. Junit and Mockito were applied to build test cases. Spring was used to replace the legacy main method and build an uber jar file with Maven. The file was then tested manually to make a Docker image. The image was published to DockerHub for easier sharing.

**Big Data Processing** [GitHub]: The project uses Hadoop ecosystem to perform big data processing in a distributed file system provisioned using Dataproc-GCP (1 Master - 2 Worker Nodes). A public BigQuery table called wdi\_2016 was used as the big data. Hive, Zeppelin, HDFS, and YARN were the tools used to answer some business questions. All the solutions were written, executed, and stored in paragraphs of Zeppelin Notebook, which can be later edited and re-used.

## Highlighted Projects

**Fetching RESTAPIs App** [GitHub]: Built APIs to manipulate another API and return processed JSON data. To improve the performance, Thread was used to make asynchronous requests. Additionally, server-side cache was implemented with Requests-cache to diminish the cost of API requests.

**Travel Booking Android App** [GitHub]: Showed tourist points on ListView. Users' selected tour was saved to SharedPreferences and used Intent to change screen. SQLite was used for data persistence. Booked tours details were then calculated and displayed on another screen.

## Professional Experiences

**Data Engineer, Jarvis (2021-present):** Worked in a Software and Data Engineer team that followed the Agile/Scrum model to implement multiple projects in Linux/Bash, Java, Docker and SQL. Conducted daily scrum meetings and bi-weekly sprint meetings with the team to keep on track with everyone's work.

**Full-stack Web Developer (part-time), ASA Energy Consulting Ltd. (2020-present):** Implemented from scratch a web application using Flask framework for users to generate reports from multiple collected data sources based on user's requirements. The front-end was implemented with the help of HTML5, JavaScript ES6, Bootstrap, Jinja and JQuery. The app used DynamoDB as a database and S3 as a file server. There was a C++ application that was built to collaborate with the web server to perform complicated and heavy calculations for generating reports. The reports were also projected into charts on the web interface using ChartJs. The web app was hosted on EC2 with HTTPS using NginX, WSGI and DNS service.

## Education

**Lambton College (2019-2021),** Post Graduate Certificate, Computer Software and Database Development - Cestar Award 2020: Highest GPA in the program for the first 2 semesters - Dean's AWARD - GPA: 3.84/4.0

**Eastern International University (2012-2017),** Bachelor of Engineering, Communication and Computer Network - Student Dean's List (2013, 2014) - GPA: 3.53/4

## Miscellaneous

- Reading novels
- Competitive gaming
- Swimming and jogging