Raymond Van . Jarvis Consulting

I am a computer science graduate from York University. Most recently, I worked as a Software Engineer at Viral Nation where I learned a lot about full stack web development and what it takes to build a production ready application. This includes not only engineering and operations, but more importantly, a focused team that can cohesively work together to meet and exceed business requirements. On my free time, I enjoy working on difficult technical challenges, particularly ones that if solved, can bring a lot of value to the world. For this reason, I like to keep up with the latest developments in machine learning research (specifically, reinforcement learning). The experience and skills I've gained over the years gives me the confidence to believe that I can be a valuable asset for any company. I would like to work for a company that has the same motives as myself - creating real world value and pushing the boundaries of what is technologically possible.

Skills

Proficient: Java, Python, Express, JavaScript, Machine Learning

Competent: PyTorch, C++, React, RDBMS/SQL, Apollo GraphQL

Familiar: C, Go, Solidity, Django, AWS

Jarvis Projects

Project source code: https://github.com/raymond-van

Linux Cluster Resource Monitoring App [GitHub]: On a CentOS VM, I provisioned a Postgresql database using docker in order to store hardware spec and usage data for linux nodes in a cluster. I wrote bash scripts in order collect, process and insert this data into the provisioned postgresql database. These bash scripts was automated to run every minute with crontab. Reports for future resource planning could then be written based off of the collected data.

Core Java Apps [GitHub]:

- JDBC App: Developed a Java 8 application that uses JDBC to connect to a PostgreSQL database that has been provisioned using Docker. Gained experience using a JDBC API where I followed the typical JDBC workflow to perform CRUD operations. Moreover, I used Maven to manage my dependencies.
- Grep App: Built and deployed a Java 8 app that reimplements the Grep linux command. My implementation uses Lambda functions and the Stream API to recursively search a directory for files that match a given regex pattern as input. Matched lines are then outputted to a log file. Moreover, the app was packaged via Maven and deployed to Docker Hub for distribution.

Highlighted Projects

Machine Learning Research Reproducibility Challenge (Python) [GitHub]: Reproduced modern machine learning research (PlaNet, Hafner et al.) using PyTorch. PlaNet is a model-based reinforcement learning agent that learns a world model and uses it to maximize its objective by planning in latent space. Achieved comparable performance to the original authors on select control tasks. Wrote a paper and presented my results.

Cryptocurrency Trading Bot (Go): Created a trading bot that finds arbitrage opportunities on decentralized exchanges and automatically executes trades if a profit can be made. Utilized low-level OS concepts (multithreading) to improve performance, graph algorithms (DFS) to quickly find profitable trading paths and applied calculus to determine the optimal input amount that would maximize profit. Wrote smart contracts to execute trades on the Ethereum blockchain.

Miscellaneous projects [GitHub]: Developed an NBA predictions model using traditional machine learning algorithms (SciPy) along with a companion site (Express, MongoDB) that would update daily with new predictions. Built a Twitter clone (Django), as well as a Pomodoro app (React).

Professional Experiences

Software Developer, Jarvis Consulting Group (Sep 2022 - present): Designed, built and tested various Java projects using technologies like Spring, Maven and Docker while following the traditional software development lifecycle. Gained experience working in an agile/scrum environment. Other technologies used include: writing bash scripts, using JDBC and creating/using REST APIs.

Software Engineer, Viral Nation (Jun 2022 - Aug 2022): Created, fixed and migrated a variety of REST/GraphQL APIs and integrated them into a React/Redux frontend. Developed the notifications feature using AWS SNS, SQS and websockets. Implemented cookie-based authentication with JWT tokens to improve security and persist user sessions.

Research Volunteer, APTLY Lab (Sep 2017 - Dec 2017): Investigated how different hyperparameters (batch-size, # of layers) effected the accuracy and performance of a deep neural network.

Education

York University (2020-2022), Bachelor of Science, Computer Science - Graduated with First Class Standing

York University (2013-2018), Bachelor of Science, Kinesiology and Health Science - Dean's Honour Roll (2017)

Miscellaneous

- Running