Rui Jie LI . Jarvis Consulting

I am looking for an opportunity as a full-stack developer. I have a bachelor's degree in software engineering from Polytechnique Montreal and about a year of work experience in software development, both in backend and frontend development. I am proactive, and I enjoy solving problems and building stuff. I am familiar with C++ (one project on embedded programming, one class on Linux OS, and OOP & design patterns), Python (performance optimization), JavaScript (frontend development), CSS (responsive design), and TypeScript (Angular for frontend, Node.js for backend) from academic and work experience.

Skills

Proficient: Python, C++, HTML, JavaScript, TypeScript, Angular, CSS, Git

Competent: Linux/Bash, RDBMS/SQL, Agile/Scrum, Java, C, Docker

Familiar: Android, AWS, Machine learning, Linux OS, Unit testing, Kotlin, Message queue, Makefile, Boost.Python, VBA

Jarvis Projects

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

Linux Cluster Resource Monitoring App [GitHub]: Made an app written in Linux Bash/Shell that monitors the resource usage of CentOS virtual machines on Google Cloud. The scripts are triggered by crontab and send the information to a Postgresql database that runs in a Docker container.

Highlighted Projects

Embedded programming [GitHub]: Wrote a C++ program that allows a robot to complete an obstacle course. Aside from some features that everyone had to do as part of the class (e.g. buttons and debouncing), I mostly worked on the following features: Detecting distance from sonars (due to COVID, it was done in Simulink rather than an actual sonar), controlling the LEDs, and CTC

Browser drawing app: Made a drawing app similar to Microsoft Paint in Angular TypeScript. The features I worked on are: Straight lines (with points between segments), aerosol, bucket fill (left click to color all connected pixels of same color, right click to color all pixels of same color), polygons (number of edges adjustable), part of free from selection, undo/redo (needs to be implemented for all drawing tools), and unit testing

Cross-platform collaborative drawing app: Made a chatting feature on Android that allows users to send messages to each other while working on the same drawing. The Android app was written in Kotlin and the Firebase was used as a database.

UI for a transit simulator: Worked on the user interface (written in TypeScript / Angular) for a transit simulator made by the client (written in Python): I worked on displaying the events generated by the backend while a simulation is running, connecting the frontend and the backend with a message queue (ActiveMQ running in Docker), pause/continue/stop simulation and deployment and package diagrams.

PolyStar computer vision team: Worked on a robotics project where the goal was to shoot the other team's robots: I wrote a program to split 1920x1080 images into 1080x720 images based on XML data, annotated 200 pictures for the machine learning algorithm, and wrote a program to detect the color of an LED in a picture (return gray if it is off, return red or blue if it is on)

Professional Experiences

Software Developer, Jarvis (2024-present): So far, made an app written in Linux Bash that monitors the resource usage of virtual machines on Google Cloud. The Bash scripts are triggered by crontab and send the data to a Postgresql database that runs in Docker.

Data Analyst (contract part time), Ethos Metrics (2024-present): Migrating data from various formats (mainly Excel and Word) to Salesforce. Most of the code is written in Python in Google Colab. Data extraction is done using either Excel or regular expressions.

Data Analyst, Fondation de Polytechnique (2023-2024): Partially automated some data entry tasks, implemented responsive design for multiple web pages (about 20 pages based on 3 templates), fixed some bugs related to scrolling and display, and made a donation tax credit estimation tool for the 2024 fundraising campaign (ex. https://soutien.polymtl.ca/ce/don-unique).

Data management assistant, Fondation de Polytechnique (2021-2023): Made a telemarketing tool in Excel VBA (used for a few months), partially automated some data entry tasks, processed a few thousand call center logs (Python regex was used to make it faster), and worked a bit on some web pages

Backend development intern, Polytechnique Montreal (2019): Optimized a telecommunication simulator written in Python by implementing multiprocessing, removing certain function calls and @property, using the **slots** attribute, avoiding calling scipy.rvs() in a loop, and avoiding copying large amounts of data between processes (up to 50% / 12-15GB less memory usage, and up to 65% faster).

Education

Polytechnique Montreal (2018-2023), Bachelor of Engineering, Computer and Software Engineering - GPA: 3.26/4.0

Miscellaneous

- Badminton and basketball