

# Fraser Raney . Jarvis Consulting

I'm a software developer with a Master's degree in Computer Science from Queen's University and a Bachelor's from Trent University. My experience spans academic research in machine learning for medical imaging and hands-on software development in industry, including two years of experience working on web apps using vanilla JavaScript (ES6+), HTML5, and CSS3 for geophysical interpretation tools at Lamontagne Geophysics. I'm passionate about solving real-world problems through technology, whether optimizing code, designing intuitive systems, or exploring tools like cloud computing and AI. What excites me most is the constant opportunity to innovate and make meaningful contributions through software.

## Skills

**Proficient:** Java, Linux/Bash, RDBMS/SQL, TypeScript, React, Python, TailwindCSS

**Competent:** Agile/Scrum, Git, Docker, Mockito, C#/C++/C

**Familiar:** AWS, Swift, Flask, Functional Programming, Reinforcement Learning

## Jarvis Projects

Project source code: [https://github.com/jarviscanada/jarvis\\_data\\_eng\\_FraserRaney](https://github.com/jarviscanada/jarvis_data_eng_FraserRaney)

**Cluster Monitor** [GitHub]: Developed a scalable Linux-cluster monitoring system using Bash scripts and crontab to log CPU, memory, and disk metrics, storing data in a PostgreSQL database within Docker; enables usage tracking and real-time cluster health visibility via SQL.

**SQL** [GitHub]: Practiced SQL fundamentals using pgAdmin 4 and a Docker-based PostgreSQL 16 (Alpine) instance: created DDL tables via ddl.sql, loaded test data with clubdata.sql, then executed analytical SQL queries involving joins, aggregation, filtering, and string manipulation to reinforce relational database concepts.

**Core Java Apps** [GitHub]:

- **Grep App:** A command-line tool built with Java 8 in IntelliJ IDEA and containerised with a Docker. The build is managed by Maven, testing is done with JUnit 5, and logging is handled via SLF4J with a Log4j backend. Lambdas and streams are also used.
- **Stockquote App:** A Java 8/Maven CLI tool that fetches Finnhub stock data, persists trades using a JDBC/PSQL DAO layer, and logs flow/error events separately with SLF4J. Uses OkHttp, Jackson, and a shaded JAR. Fully tested with JUnit/Mockito and deployed through Docker Compose with Docker Hub images.

**Springboot App** [GitHub]: This Spring Boot trading application provides a REST API for managing traders, accounts, portfolios, stock quotes, and market orders. It integrates live market data via Finnhub and uses Java 8, Maven, JPA/Hibernate, PostgreSQL, and Docker. Swagger UI enables testing, while JUnit 5 and Mockito ensure reliable service and data layers.

**React Trading App** [GitHub]: This full-stack trading management application uses React, TypeScript, Ant Design, and the Spring Boot backend. The app supports CRUD operations for traders and accounts, real-time data from Finnhub with client-side validation, and API fetch managed by Axios. Providing a typical, responsive frontend.

## Highlighted Projects

**Lamontagne Geophysics - 3C Plotter:** Maintained and enhanced a browser-based geophysical data visualization tool using vanilla ES6+ JavaScript, D3.js, HTML5 and CSS3. Implemented signal-normalization algorithms, offline caching via custom service workers, installable web app manifests, support for legacy file formats, user preferences and viewing options, dynamic PDF export, UI enhancements and bug fixes. <https://www.lamontagnegeophysics.com/plotter/> .

**Prostate CT Segmentation Using UNet** [GitHub]: Developed a UNet-based deep learning model for prostate segmentation in CT scans using Python and PyTorch on Google Colab. Implemented data preprocessing with NumPy, SimpleITK, and scikit-learn; trained and evaluated on GPU to demonstrate semantic segmentation, visualization, and model performance in a medical imaging context.

## Professional Experiences

**Software Developer, Jarvis (2025-present):** Collaborated using Agile/Scrum methodology to deliver back-end and data projects. Gained hands-on experience with Linux/Shell, SQL, Git, Docker, SDLC practices, and workflows for

real-world enterprise environments.

**Software Developer, Lamontagne Geophysics Ltd. (2022-2024):** Developed and enhanced geological-interpretation web applications using Vanilla JavaScript (ES6+), HTML5, CSS3, d3.js, and Three.js; implemented dynamic UI controls, offline caching with service workers, and prototype migration to React/TypeScript. Debugged visualization software, documented code changes, and updated manuals.

## Education

**Queen's University (2019-2021),** Master's of Science, Computing - R. Samuel McLaughlin Fellowship

**Trent University (2015-2019),** Bachelor of Science in the Honours Program, Computing Systems, Computing and Information Systems - Trent National Renewable Scholarship - Dean's Honour Roll (2015-2019)

## Miscellaneous

- Coach of the Year - 2024, Kingston Rowing Club
- Volunteer, Murphy Charitable Foundation, contributing to the open-source Next.js/React pen-pal application: Figma/Tailwind CSS, and supported GCP backend features.
- Volunteer, PlanetGeek Toronto, refurbishing and repairing Macs and PCs for reuse to support e-waste reduction and digital access.