# Luke Lu

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## TECHNICAL SKILLS

**LANGUAGES**

- C#, Java, C++, Python, JavaScript, HTML/CSS, SQL (SQL Server, Oracle, SQLite)

**PLATFORMS/FRAMEWORKS/ARCHITECTURES**

- .NET (.NET MAUI, ASP.NET Core), React.js, Node.js, Express.js, JUnit, GNU (GDB), MVC, REST

**TECHNOLOGIES/APIs**

- Git, Docker, AWS, IIS, Unix (Linux, Mac), Postman, SSRS, JDBC, JSON, Ollama, OpenAI

## WORK EXPERIENCE

**JAN 2025 – PRESENT (Contractor Full-Time)**

**Full Stack Software Developer (Android Platform) – Canadian Nuclear Laboratories**

Tech stack: .NET MAUI, ASP.NET CORE, C#, JavaScript, HTML/CSS, MS SQL Server, SSRS

- Leading the implementation and assisting in the design of a secure high-availability fault-tolerant android platform that will be the next evolution of our existing sitewide facility readings & inspections system. Expecting to deliver a cutting-edge end-product consistent with CNL's reputation of technological excellence.
- Playing a leadership role in onboarding new interns while delivering high-priority features to our clients for ongoing projects.

**MAY 2024 – DEC 2024 (Contractor Part-Time) | SEPT 2023 – APR 2024 (Co-Op)**

**Full Stack Software Developer (Web & Database Systems) – Canadian Nuclear Laboratories**

Tech Stack: ASP.NET CORE, C#, JavaScript, HTML/CSS, MS SQL Server, SSRS

- Spearheaded the implementation of a robust feature-rich web platform automating sitewide equipment maintenance operations. Reduced missed required maintenance by >95% and maintenance overhead time by >80%. Revamped user experience on the existing Fleet Management web platform, enhancing visuals and reducing clicks-per-operation >50%.
- Streamlined reporting services by altering database schema to support report-oriented tables. Reduced lines-of-code for reporting queries by >30% and stored procedure execution times by >50%. Introduced live data analytics to the Fleet Management homepage and on-demand reporting. Reduced error margin of frequently requested reports by >90% and saved in excess of 300 work hours and counting.
- Enhanced the integrity of our data pipeline for numerous projects by normalizing databases and implementing additional client and server-side input processing and validation. Eliminated all data anomalies in the affected projects.

## RECENT SOFTWARE PROJECTS

**WINTER 2025**

**Project Ramster** – C++, OpenGL, TBD…

- Building a fully functional indie arcade game from scratch. Using C++ to program the core game engine and OpenGL for graphics. Expecting to create intelligent opponent AI with a combination of conventional programming OpenAI API calls.

**SUMMER 2024**

**LLM Code Interpreter** – React/Express.js, JavaScript, HTML/CSS, SQLite, Docker, Ollama

https://github.com/LukeL0000/LLMCodeInterpreter

- Implemented a database and LLM-Driven React/Express.js web application that generates code based on user prompts.
- Utilized open-source large language models from Ollama to generate working code based on user prompts. Ensured consistency through extensive prompt engineering and output parsing.
- Containerized and deployed locally using Docker for maximum device compatibility.

**SUMMER 2023**

**Trip Organizer** – Java, JDBC, Oracle Database, JavaFX

https://github.com/LukeL0000/TripManager

- Developed a robust database-driven solution for finding, organizing, and recording trips. Created a simple JavaFX front-end delivering a reliable user experience integrating effectively into the Java back-end that accesses an Oracle Database via JDBC.
- Enforced consistent logic for trip organization through entity relationships and column constraints, empowering the user with relevant information for organizing the best trips that they desire.

## EDUCATION

**SEPT 2021 – MAY 2026 (EXPECTED)**

Major in Computer Science, Faculty of Science – University of British Columbia

Core GPA: 3.85 | 83%