

SAMANTHA (SAM) LUI

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EDUCATION

Bachelor of Computer Science (Third Year) | University of British Columbia *September 2024 – May 2027*
Advanced Diploma – Clinical Genetics (88%) | British Columbia Institute of Technology *August 2020 – October 2021*
Bachelor of Health Sciences (Dean's Honour Roll) | Simon Fraser University *September 2011 – December 2017*

TECHNICAL PROJECTS

AniMori – Anime Library Desktop App | *Electron.js, React, Vite, SQLite, Node.js, Jikan* | [GitHub](#) *August 2025 – Present*

- Developing a cross-platform desktop application with **Electron.js + React**, integrating the **Jikan API** for automatic metadata fetching to minimize data entry
- Connected frontend and **SQLite** backend with **IPC (ipcRenderer, ipcMain)** and query functions, enabling smooth data flow
- Optimized database schema with **DBeaver** to persist user data and support extensible features (i.e., ratings, comments)

SipLy – Beverage Intake Visualization Tool | *React, Spring Boot, H2, Spring AI, Groq* | [GitHub](#) *July 2025 – Present*

- Scaling DailySips from a Java CLI/Swing prototype to a full-stack **React + Spring Boot** system with **Recharts** integration, providing interactive beverage intake visualizations
- Designed **RESTful CRUD APIs** with **H2** and secure **BCrypt** authentication, ensuring reliable data storage
- Planning the integration of **Spring AI** with **Groq LLaMA3** for personalized beverage recommendations, based off user data

Personal Portfolio Website | *React, Vite, Netlify, EmailJs, Typed.js* | [GitHub](#) | [Link](#) *May 2025 – Present*

- Deployed a responsive **React + Vite** portfolio on **Netlify**, highlighting technical projects to strengthen personal branding
- Enhanced user engagement by integrating **Typed.js**, **EmailJS** and **React-Router-DOM** for client-side functionalities

Pantry Pal – AI Recipe Generator | *React, Vite, Express.js, MongoDB, Groq* | [GitHub](#) *March 2025 – March 2025*

- Built backend using **Express.js + MongoDB Atlas** to support cloud-based pantry tracking in a full-stack AI recipe generator
- Integrated **Groq's LLaMA 3.3 API** and engineered dynamic prompts to automate recipe generation from user inputs

DailySips – Health Logging App | *Java, JUnit Jupiter, Java Swing* | [GitHub](#) *January 2025 – April 2025*

- Designed a **Java CLI** and **Swing** application, applying **OOP principles** to support user-informed health tracking
- Implemented **JSON data persistence** and **JUnit** test suites, achieving **~100%** coverage of CLI logic to permit data saving/loading while maintaining code robustness

PROFESSIONAL EXPERIENCE

Shared Services Canada – I.T. Analyst Co-op Student | Vancouver, B.C. *August 2025 – Present*

- Supporting the Digital Services sector with **Windows 11 system imaging** and **BIOS** configuration, coordinating secure asset deployments for federal end-users through **Service Manager 9** and **Excel**
- Prototyping internal automation tools (i.e., **JavaScript**, **Python**, **PowerShell**) to reduce repetitive user-based input

Provincial Health Services Authority – Clinical Genetics Technologist | Vancouver, B.C. *July 2021 – August 2024*

- Processed **~30 – 40** genetic analyses/week under standardized protocols, ensuring timely and accurate results reporting
- Liaised with IT/vendors to **troubleshoot** LIS and equipment software/hardware issues, reducing operational downtime

EXTRACURRICULARS & LEADERSHIP EXPERIENCE

UBC BCS – BU1DL Mentor | Vancouver, B.C. *August 2025 – Present*

- Mentoring 1 – 4 builders in a pilot initiative, providing technical guidance in their MVP development with monthly check-ins to maintain project momentum

The C.O.D.E. Initiative – Remote Volunteer Tutor | Vancouver, B.C. *July 2021 – August 2024*

- Facilitated **Python** and **web development** lessons to neurodivergent youth, adapting teaching style to support learning needs, increasing overall student confidence in technical problem-solving

TECHNICAL SKILLS

Languages | HTML5, CSS3, JavaScript, C++, Python, Java, SQL, R

Frameworks/Libraries | React.js, Node.js/Express.js, Electron.js, Spring Boot, Spring AI, Recharts, Tidyverse (ggplot2), Tidymodels, JUnit Jupiter, Java Swing

Databases | PostgreSQL, MongoDB (NoSQL), SQLite, H2 Database Engine

Developer & Collaboration Tools | Git, GitHub, Postman, Vite, Jupyter Notebooks, Groq, Service Manager 9, Confluence