

# 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 Tracking Desktop App** | *ElectronJS, React, SQLite, Node.js, Jikan* | [GitHub](#) *August 2025 – Present*

- Developing a cross-platform anime tracker with **ElectronJS + React**, integrating the **Jikan** API for automatic metadata fetching to reduce manual data entry
- Connected frontend and **SQLite** backend with **IPC (ipcRenderer, ipcMain)** and query functions, enabling smooth data flow
- Designed and optimized database schema to persist user data and support extensible features (i.e., ratings, comments)

**SipLy – Full-Stack Beverage Tracker** | *React, Spring Boot, H2, Spring AI, Groq* | [GitHub](#) *July 2025 – Present*

- Scaling a beverage tracking app 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

**DailySips – Health Tracking 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

**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

## PROFESSIONAL EXPERIENCE

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

- Supporting the Digital Services branch, including **system imaging**, equipment deployment and **Tier 1 troubleshooting** to maintain service continuity for federal employees

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

- Performed **~30 – 40** complex genetic analyses weekly under standardized protocols, ensuring timely, accurate results delivery for clinicians
- Liaised with IT/vendors to **troubleshoot** LIS and equipment software/hardware issues, reducing operational downtime

## EXTRACURRICULARS & LEADERSHIP EXPERIENCE

**UBC BCS – BU1LD Mentor (Selected)** | Vancouver, B.C. *August 2025 – Present*

- Mentoring 4 builders in a 4-month pilot program, providing technical guidance in their MVP development, setting up 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, ElectronJS, Spring Boot, Spring AI, Recharts, Tidyverse (ggplot2), Tidymodels, JUnit Jupiter, Java Swing

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

**Developer Tools** | Git, GitHub, Postman, Vite, Visual Studio Code, Jupyter Notebooks, Netlify, Groq API