Annie Wu

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Education

University of British Columbia Sep. 2024 – Apr. 2028
Bachelor of Science, Computer Science (Co-op) *Vancouver, BC*

- Third Year – **3.75 GPA**
- **Relevant Coursework:** Software Construction (CPSC 210), Data Structures & Algorithms (CPSC 221), Relational Databases (CPSC 304), Applied Machine Learning (CPSC 330)

Work Experience

CTMS Co-op Student Sep. 2026 – Present
Vancouver Coastal Health Research Institute, Vancouver Coastal Health *Vancouver, BC*

- Design and validate **REDCap data collection instruments** for **clinical research studies**, building **field validation** and data dictionaries to ensure **data quality** across **100+ studies**.
- Configure study sites in the Clinical Trial Management System, structuring **relational study data** and workflows.
- Automate multi-step processes with **Power Automate**, sequencing triggers and actions to replace manual work.
- Map **data requirements and workflows** across finance and research for a new financial tracking module.
- Lead **user training sessions**, translating technical workflows into clear guidance for **non-technical users**.

Technical Projects

HATRIC: LLM/VLM Trivia Robot | *Python, Ollama (LLM/VLM), FastAPI, ESP32* Oct. 2026 – Present

- Building a multi-party **LLM agent** in async Python that hosts soccer trivia for 2–4 players, using **prompt-engineered structured output** to pick whom to address and generate speech, gaze, and gesture.
- Integrating an on-device **vision-language model (VLM)** via **Ollama** that reads webcam frames to locate players and gauge engagement, steering robot gaze.
- Orchestrating agent calls via a **FastAPI/WebSocket** server and SQLite, driving a web avatar and **ESP32**.
- Designing for **privacy** with on-device vision and **explainability** with per-action rationale logs.

IoT Inventory Tracker | *C++, Arduino, ESP32-WROOM-32, RFID, TypeScript* Jun. 2026 – Aug. 2026

- Built an **embedded hardware system** on an ESP32 that read RFID tags to log items in **real time**.
- Implemented **client-server communication** over WiFi, turning physical events into structured records.

FIFA 2026 Tracker and Predictor | *Python* Jun. 2026 – Jul. 2026

- Built a **Python** engine using Elo ratings and **200,000 Monte Carlo simulations** to forecast the winner.
- Evaluated the model with chronological backtesting on past results, reaching **83.8% prediction accuracy**.

TrackTheTrek | *Java* Jul. 2025 – Sep. 2025

- Built a desktop hiking tracker with an **object-oriented class hierarchy** and **JSON data persistence**.

Leadership & Volunteering

Social Coordinator Sep. 2025 – Present
Computer Science Student Society *Vancouver, BC*

- Run 3 social events per term for **3.4k+ CS students**, managing logistics, budgets, and vendors.

Bootcamp Volunteer May 2025 – Jun. 2025
GIRLsmarts4tech *Vancouver, BC*

- Taught JavaScript, Python, and HTML in weekly sessions for middle schoolers building their first websites.

Technical Skills

Languages: Python, Java, C++, C, JavaScript, TypeScript, SQL, R
Concepts: LLMs, VLMs, Prompt Engineering, Agent Orchestration, OOP, Client-Server, Embedded Systems
Web & Backend: FastAPI, SQLite, React, Next.js, Expo, Firebase, WebSockets, HTML, CSS, Git
Tools: Ollama, Claude, Codex, REDCap, Power Automate, Excel, PowerPoint, Word, Sheets, Figma, Jane

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