

# MAGGIE GU

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## TECHNICAL SKILLS

**Programming Languages:** Assembly, C++, JavaScript/Typescript, Java, PHP, Python, R, Rust, Swift  
**Frameworks:** Bootstrap, Next.js, Node.js, PyTorch, React, TensorFlow  
**Tools:** Confluence, Git, Jira, Power Automate, PowerBI

## EDUCATION

**University of British Columbia** September 2019 - April 2025 (Anticipated)  
*BASc, Computer Engineering - Math Honours*

## EXPERIENCE

**Data Engineer** April 2023 - Ongoing  
*OVCARE Vancouver, BC*

- Designed & maintained data pipeline to consolidate patient and test data to SQLite database
- Developed graph algorithms to implement database schemas to detect and model patterns and trends with 84% accuracy
- Introduced QA checks and unit tests to validate data integrity and accuracy throughout consolidation processes

**Full-Stack Engineer** March 2023 - Ongoing  
*Broadsight Tracker Vancouver, BC*

- Implemented key features for web application, including calendar view, data analytic graphs and data filters for quick search
- Developed and maintained RESTful APIs for several crucial user account retrieval features

**Project Management & Software Engineer Intern** February 2022 - August 2022  
*Tesla Fremont, CA*

- Contributed to the development of a mobile app by designing and implementing UI features using React Native
- Developed a Python script to collect and organize data based on metadata, improving data analysis efficiency by 50%
- Managed multiple infrastructure projects (valued up to \$4.3 million) and coordinated with cross-functional teams

**Software Engineer** October 2020 - March 2021  
*Vancouver General Hospital Vancouver, BC*

- Led and built homepage and navigation features for Android mobile UI for patient flow tracker app
- Resolved existing bugs in the front-end, back-end, and application software

## PROJECTS

**Mealio** *Swift, Python, TensorFlow, SQL*

- Developed back-end for app that prepares grocery lists based on user's preferences and seasonal produce
- Implemented web scraping to compare prices of produce in nearby grocery stores
- Managed team of five, including UI/UX designer, front-end and back-end engineers

**Wildfire Detection Module** *React, TailwindCSS, C++, Jetpack Compose, LAMP, Python, TensorFlow*

- Product is low-cost, easy-to-distribute module consisting of micro-controllers, sensors and solar-panel power system, coupled with web and Android app
- Built and trained early prevention wildfire detection module which analyzes current and history data to predict wildfire likelihood

## EXTRACURRICULARS

**Research & Development Engineer** | *UBC Faculty of Medicine* Jan 2022 - Sept 2022

- Used C++ to build back-end of a proprietary plug-in tool for virtual EEG monitoring

**Research Assistant** | *UBC Department of Civil Engineering* November 2021 - April 2022

- Developed & tested program using Python to model environmental impact through infrastructures' lifetime
- Tailored programs to meet needs of clients including the City of San Francisco and Vancouver

**Captain of Operations & Finance** | *UBC Biomedical Engineering Student Team* May 2021 - October 2022

- Managed over 100 undergraduate and graduate students spread across eight sub-teams