Allan Wang

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EDUCATION

Bachelor of Science, Combined Major in Computer Science and Statistics   **Sept 2022 - May 2027**
University of British Columbia   Vancouver, BC
- Cumulative GPA: **4.33/4.33**; two times Dean's Honour List; Trek Excellence Scholarship recipient.
- Executive of UBC Cubing Club: Treasurer & full-stack developer; managed club funds and developed website.

TECHNICAL SKILLS

Languages: C, Swift, JavaScript, C++, Java, Python, SQL, R, HTML, CSS
Technologies: React.js, Node.js, Express.js, Git, Linux, Supabase, PostgreSQL, JUnit, Java Swing, GDB, Python pandas, Spring Boot, Zephyr OS, OpenThread API, SFML, Oracle Database
Developer Tools: VS Code, Xcode, IntelliJ IDEA, CLion, Postman, Docker, nRF Connect, Vim

EXPERIENCES

Software Engineer, LED Smart Inc. | *Surrey, BC*   **Dec 2024 – Present**
- Developed firmware for LED Smart **modules** in **C**, enabling Thread networking using the OpenThread API to support UDP communication to handle protocol messages for controlling LED states and obtaining sensor data.
- **Implemented protocols** to enable reliable communication between devices and server; maintained version control with **Git,** working across multiple development branches.
- Developed and executed a manual test procedure to check functionalities of modules.
- Improved and stabilized success rate of Thread network initialization on modules from **~80% to ~100%.**

Full-Stack Developer, UBC Cubing Club | *Vancouver, BC*   **Jan 2025 – Present**
- Designed, developed, and directed the creation an interactive website for the UBC Cubing Club.
- Built responsive UI using **React, React Router, CSS,** ensuring intuitive user experience.
- **Designed and managed a PostgreSQL database** with Supabase, optimizing data storage for member profiles and competition results; integrated Supbase's user authentication API.

Coding Instructor, Robokids Canada | *South Surrey, BC*   **Aug 2024 – Nov 2024**
- Assisted students with **LeetCode-style Python** questions; reviewed work of students and **tested** them for bugs and provided insights for optimization and improvements. Led camps and maintained safe environment.

PROJECTS

Pet Management System | Full Stack, JavaScript (React, Node, Express), SQL, Database   **Jan 2025 – Apr 2025**
- Developed a web application that allows users to perform **CRUD** operations on a pet shelter database enabled with **custom APIs** with structured routing; designed and evaluated **UI/UX** to ensure intuitive operations.
- Designed, normalized, and implemented an Oracle Database schema to optimize data storage and efficiency.
- Enabled custom queries from users by building **SQL** queries dynamically based on user inputs.

Algorithm Visualizer | Swift, SwiftUI, Asynchronous Programming, Algorithms   **Aug 2024 – Dec 2024**
- Developed an algorithm visualizer that solves mazes in the form of a **multi-view** iOS application.
- Rendered customizable mazes with **SwiftUI**, updated the maze upon user inputs and enabled additional features such as editing the individual cells of the maze and generating a randomized maze.
- Implemented **BFS and DFS** to solve the maze designed by the user, each step of the search algorithm will be rendered as an animation, achieved with **asynchronous programming**.

2D Platformer Game | C++, SFML, Type Hierarchy, CMake, Collision Testing   **May 2024 – Aug 2024**
- Developed a 2D platformer game in **C++** that keeps track of score, performs **collision testing**, and has dynamic difficulty, using object-oriented programming fundamentals.
- Utilized **SFML** library for visualization and animating sprites in the window upon user inputs and clock ticks.
- Implemented states using **type hierarchies** to switch between different states of the program.