

# William Pai

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## EDUCATION

### McMaster University

Hamilton, ON

*Bachelor of Engineering, Software Engineering Co-op*

*Sep. 2020 – Apr. 2025 (Expected)*

#### Relevant Coursework:

Data Structures and Algorithms (Java), Databases (SQL), Software Development (C),  
Concurrent Programming (Java, Go, Python), Software Design, Testing & Requirements (Java)

## EXPERIENCE

### SOTI Inc.

Sep. 2023 – Present

*Software Developer Co-op*

*Mississauga, ON*

- Developed with **Angular**, **Bootstrap**, and **.NET C#** in **full stack development** to drive advancements in XSight, allowing customers to manage diagnostic data of thousands of **iOS**, **Android**, and other **mobile devices**
- Designed and implemented a comprehensive survey application, encompassing form creation, submission, and secure results storage using **Entity Framework Core** with **SQL databases** and **JWT authentication**
- Actively resolved **Jira** tickets, integrating automated **Jenkins** tests to enhance product stability and functionality
- Expertly implemented **Jasmine** and **Karma** for robust unit testing, ensuring high code quality and reliability

### McMaster Engineering Society

May 2023 – Present

*Infrastructure Technology Lead*

*Hamilton, ON*

- Redesigned McMaster University's outdated booking system using **React.js**, **TypeScript**, **Tailwind CSS**, **Next.js**, and **MongoDB**, with a focus on usability, and speed, to be used by over 5,000 students
- Crafted a custom **UI/UX design** from scratch, enhancing overall user interaction, satisfaction, and accessibility
- Increasing efficiency by optimizing the booking process, reducing the average meeting room booking time by **6x**

### InsideDesk Inc.

May 2022 – Sep. 2022

*Software Engineer Co-op*

*Toronto, ON*

- Developed additional features for InsideAssist software using **Angular**, **TypeScript**, **MySQL**, **AWS S3**, **Linux**, **Python**, **Flask**, and **REST APIs**, improving management of **4 million** dental insurance claims annually
- Designed and implemented a **Google Chrome extension** using **React.js**, **Material UI** library, **TypeScript** and **Auth0**, aiding easy access to patient's insurance logins
- Improved **E2E tests** using **Cypress.io**, **GitHub Actions**, and **CI/CD pipelines** to ensure minimal errors
- Maintained **25 JavaScript** and **Python** web scrapers increasing data fetching effectiveness by **7%**

### WaveDirect Telecommunications

May 2021 – Aug. 2021

*Software Developer Co-op*

*Leamington, ON*

- Developed a desktop app **GUI** to parse **10,000** financial data entries into **Linux** systems using **Python & PyQt**
- Automated handling **2,000** DMCA infringement notices annually using **Python**, **Flask**, **Gmail API**, and **SQL**

## PROJECTS

### Subway Transit Systems Analysis | *Python, Pytest, Flake8, Matplotlib, Jupyter Notebook*

- Developed a **graph traversal algorithm suite**, implementing **Dijkstra's** and **A\*** shortest path algorithms, and **benchmarked** both algorithms in terms of execution time and **KPIs** to identify optimal travel itineraries

### Cabpool | *React Native, Node.js, Express.js, Google Maps API, Google Firebase*

- Created a **React Native mobile application** for a taxi ride-sharing service to add carpool matchmaking
- Engineered a secure and robust, **API** backend system using **Node.js** and **Express.js** to interconnect multiple user devices, leveraging **Google Cloud Platform's Firebase** for encrypted data storage and management
- Composed **Software Requirements Specification** documents to establish a comprehensive blueprint for project development, ensuring clear communication of system capabilities and expectations among stakeholders
- Utilized a combination of **sequence diagrams**, **class diagrams** and **business events** to effectively illustrate system interactions and structure, providing a coherent understanding of the system's complex workings

## TECHNICAL SKILLS

**Languages:** JavaScript, TypeScript, Java, Dart, Python, C, C#, Go, Bash, SQL, Swift, HTML, CSS

**Frameworks:** Flutter, React Native, React, Angular, Vue.js, .NET, SwiftUI, Node.js, Express.js, PyQt, Flask

**Tools:** Git, Tailwind CSS, AWS, GCP, MongoDB, JUnit, Docker, Cypress.io, ClickUp, Figma, Adobe XD