

William Pai

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EDUCATION

McMaster University

Bachelor of Engineering, Software Engineering Co-op

Hamilton, ON

Sep. 2020 – Apr. 2026

Relevant Coursework:

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

TECHNICAL SKILLS

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

Frameworks: React, Tailwind CSS, Next.js, Astro, Angular, Flutter, React Native, .NET, SwiftUI, Express.js, Flask

Tools: Git, Tailwind CSS, AWS, Google Cloud Platform, MongoDB, Docker, Cypress.io, Figma, Adobe XD

PROFESSIONAL EXPERIENCE

SOTI Inc.

Software Developer Co-op

Sep. 2023 – Aug. 2024

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**
- Implemented an internal survey application using **Entity Framework Core** with **SQL databases** and **JWT authentication**, allowing employees to submit anonymous, secure data within the organization
- Proactively resolved **Jira** tickets while integrating **Jenkins** automation and implementing **Jasmine/Karma unit tests** to improve product stability, functionality, and code quality
- Spearheaded several major **Angular** version upgrades, refactoring code to address **package dependencies** and redeveloped the company's **UI component library**, ensuring consistency and **long-term support**
- Contributed to **backend API** development in **ASP.NET EF Core** by designing and implementing new features, fixing bugs in **API routes**, and creating thorough **documentation** for changes

BuildCores

Software Developer (Contract)

Apr. 2024 – June 2024

Remote, USA

- Developed features for **BuildCores** , a modern PC part list builder with 3D build visualization, utilizing **React**, **Remix**, and **Sass** to deliver an intuitive and functional **user experience**
- Conducted a comprehensive **UI/UX** analysis of the BuildCores platform, identifying usability issues and proposing actionable design improvements to enhance **user workflows** and **interface accessibility**

InsideDesk Inc.

Software Engineer Co-op

May 2022 – Sep. 2022

Toronto, ON

- Developed additional features using **Angular**, **SQL**, **AWS S3**, **Python**, **Flask**, and **REST APIs**, maintaining **25 JavaScript** and **Python** web scrapers to improve the management of **4+ million** annual dental insurance claims
- Designed and implemented a **Google Chrome extension** using **React.js**, **Material UI** library, **TypeScript** and **Auth0**, syncing with existing **software architecture** to aid in easy access to client's insurance logins
- Improved **E2E tests** using **Cypress.io**, **GitHub Actions**, and **CI/CD pipelines** to ensure minimal errors
- Implemented upgrades to an **internal administrative web application** using **React Redux** to monitor system performance and test data processing pipelines, enhancing operational efficiency for multiple web scraping systems

WaveDirect Telecommunications

Software Developer Co-op

May 2021 – Aug. 2021

Leamington, ON

- Automated the processing of 10,000+ daily financial data entries into **Linux systems** by developing a **Python desktop application** with a **PyQt** GUI, replacing manual labor for improved efficiency while reducing errors
- Streamlined the handling of 2,000+ annual DMCA infringement notices by creating a **Python script** integrated with **AWS Lambda**, **bash scripting**, **Gmail API**, and **Flask** to parse emails, cross-reference IPs in a **MySQL database**, and notify customers, reducing manual effort and ensuring compliance
- Developed a **Slack bot** using **Python** to integrate a project management tool, **Linear.app**, with Slack, leveraging **GraphQL** to fetch from **Linear.app API**, automating real-time issue tracking and workflow management through interactive message-driven actions, enhancing efficiency and collaboration within the software development team

EXTRACURRICULAR EXPERIENCE

McMaster Software Engineering Society

May 2024 – Present

Development Team Manager

Hamilton, ON

- Led the development of a **high-performance, mobile responsive** website for a student union of **1,000+** software engineering students using **Astro**, **MDX**, **Tailwind CSS**, **TypeScript**, **Apache HTTP**
- Leveraged **Astro Content Collections** for **optimized performance rendering** to host and manage a database of blog posts and student resources for easy access, delivering a resource-rich, **user-friendly website** [↗](#)

FRC Team 7902 Markham FireBirds

September 2023 – Present

FIRST Robotics Programming & Systems Mentor

Markham, ON

- Mentored students on the principles of software-hardware coding and communication protocols, teaching how software interfaces with hardware components, fostering a comprehensive understanding of **system architecture**
- Developed custom **Java software libraries and classes** to abstract hardware components (e.g., motors, sensors, controllers) into clean and reusable objects, enhancing **code readability** and **reducing complexity**
- Developed and fine-tuned **motion control algorithms** using feedback-based techniques such as **PID** tuning and predictive **feed forward** control, enabling smooth and accurate motion under varying conditions
- Utilized robust **debugging tools** and **telemetry systems** to monitor live robot **performance**, **analyze sensor data**, and identify issues efficiently during runtime

McMaster Engineering Society

May 2023 – Present

Infrastructure Technology Team

Hamilton, ON

Senior Manager

May 2024 – Present

- Oversee **full-stack** projects, including a room booking platform, clubs management portal, and MES' website using **Next.js**, **TypeScript**, **Tailwind CSS**, and **MongoDB**, hosting resources for 6,500+ engineering students
- Led a team of 25+ developers as a **scrum leader**, facilitating weekly **stand ups**, providing individual mentorship, and delivering constructive feedback to drive **efficient development** and maintain seamless team communication
- Crafted custom **Figma UI/UX designs**, working with designers to ensure cohesive and user-friendly interfaces

Manager

May 2023 – Apr. 2024

- Managed a development team to redesign and rebuild the MES' official website, migrating from **Wix** to **Next.js**
- Led efforts to improve **performance**, reorganize the website layout, and transform it into a fully **responsive interface**, ensuring **seamless accessibility** for users across desktop and mobile devices

McMaster EcoCAR

Sep. 2021 – Apr. 2023

HMI/UX Team

Hamilton, ON

Lead

May 2022 – Apr. 2023

- Managed the team by conducting workshops to enhance team skills, overseeing the **design and development process**, and ensuring high-quality deliverables that aligned with **industry standards** for **usability** and **responsiveness**
- Led the team in proposing a new **infotainment design** for passenger vehicles, developing end-to-end **Figma prototypes** and implementing the design into a functional **mobile application** using **Flutter**

Developer

Sep. 2021 – Apr. 2022

- Designed iterative **Figma** prototypes and implemented a **Flutter-based mobile application** for a tablet **infotainment display**, enhancing **user experience** and winning 2nd out of 13 teams in the EcoCAR EV Challenge
- Developed an **interactive tutorial application** to guide drivers on adaptive cruise control and lane-keep assist features, integrating the application with the vehicle's software real-time feature synchronization

PROJECTS

Cabpool [↗](#) | *React Native, Node.js, Express.js, Google Maps API, Google Cloud Platform*

- Developed a **React Native mobile app** to enable taxi ride-sharing with carpool matchmaking by dynamically tracking user locations and optimizing routes using **Google Maps API**, enhancing efficiency and user experience
- Designed a secure and scalable **API backend** with **Node.js** and **Express.js**, leveraging **Firebase** for **encrypted data storage** and seamless device synchronization
- Composed **Software Requirements Specification** documents with sequence/class diagrams and business events, effectively illustrating system interactions and the use of the **MVVM architecture** in software design