# Xin Huey Wong

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## EDUCATION

**University of Waterloo** — Waterloo, Ontario
*Bachelor of Computer Science, Software Engineering Specialisation* — *Sept 2021 – Apr 2026*

## EXPERIENCE

**Software Developer** — May 2024 - Aug 2024
*Imagine Communications* — *Waterloo, ON*
- Ensured application stability by testing and maintaining **Docker** containers and **Kubernetes** pods, updating Docker versions to uphold security standards.
- Built automated testing frameworks using **Python** and Selenium, reducing regression testing time by 50%.
- Optimized performance of **Amazon EC2** instances by configuring appropriate Amazon Machine Images (AMI).

**VP of Development, UW Data Science Club** — Sept 2024 - Dec 2024
*University of Waterloo* — *Waterloo, ON*
- Led development of a **Next.js** QR code scanner application, enabling efficient member verification and check-in through API integration with **MongoDB**.
- Created automated data validation scripts in **Python** to cross-reference member data between CSV files and MongoDB, significantly reducing manual verification efforts and ensuring data integrity.

**Software Test Engineer** — Sept 2023 – Dec 2023
*Christie Digital Systems* — *Kitchener, ON*
- Designed and executed comprehensive test cases, uncovering and reporting five critical defects before the release of MicroTiles LED software.
- Improved and debugged the CAWS web UI automated testing tool (Python and Selenium), achieving over 95% code coverage and substantially increasing testing reliability.
- Built and implemented a log-monitoring application using **Python** and PyQt5, establishing live telnet sessions to effectively monitor logs, resulting in a 40% improvement in testing efficiency and accuracy.

## PROJECTS

**LinguaStream** | *Python, Flask, React, Firebase* — May 2024
- Designed and developed the front-end of a web application capable of translating YouTube video audio into multiple languages, utilizing **React** and Chakra UI.
- Integrated front-end components with **Flask**-based backend services, ensuring seamless data transmission through thoroughly tested API endpoints via Postman.
- Built and integrated an AI-powered chatbot leveraging Google Gemini to enhance user interaction by answering queries related to video content.

**Virtual Bookstore** | *React, MongoDB, Express.js, Node.js* — Jan 2024 – Apr 2024
- Developed a full-stack online bookstore platform, implementing the user interface with **React**, database management with **MongoDB**, and backend logic using **Express.js** and **Node.js**.
- Performed comprehensive API testing with Postman to validate endpoint functionality and improve application reliability.

**MIPS Compiler** | *C++, DFAs, Tokenising, Parsing* — Jan 2023 – Apr 2023
- Developed a robust compiler in **C++** converting a high-level C-like programming language into optimized MIPS assembly.
- Utilized deterministic finite automata (DFAs) and regular language theory for efficient lexical analysis, parsing, and type checking.
- Implemented effective data structures and object-oriented programming techniques, significantly reducing processing time by approximately 50%.

## TECHNICAL SKILLS

**Languages**: Python, C/C++, SQL (Postgres), JavaScript, HTML/CSS
**Frameworks**: MongoDB, Express.js, React.js, Node.js, Flask
**Developer Tools**: Git, Docker, AWS, VS Code, Visual Studio, Kubernetes
**Libraries**: pandas, NumPy, Matplotlib, Selenium