Xin Huey Wong

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○ https://github.com/xinhuey

SKILLS

Programming Languages and Tools	Frameworks and libraries
Python, C/C++, SQL, HTML5/CSS, TypeScript, Valgrind, Docker, Kubernetes, Postman, Jira	MongoDB, Express.js, React.js, Node.js, Flask, PyQt5, Selenium, PyQtGraph, Pandas, OpenCV

PROFESSIONAL EXPERIENCE

Software Developer, *Imagine Communications*   05/2024 – 08/2024 | Waterloo, Canada
- Ensured Versio Control application stability by testing containers in **Docker** environments, monitoring the health of **Kubernetes** pods, and updating Docker versions to maintain security and compatibility.
- Developed an automated testing framework in **Python** and **Selenium** for Versio Control Application, reducing regression testing time by **50%**.
- Configured **Amazon EC2** instances with the correct **Amazon Machine Images (AMI)** based on project requirements, ensuring that the instances were optimized for performance prior to deployment.

VP of Development, *UW Data Science Club*   09/2024 – present | Waterloo, Canada
- Developed and integrated a QR code scanner component in a **Next.js** application that scans, decodes, and verifies member information, and allows for member check-in through API calls to **MongoDB**.
- Built a **script to validate** and cross-check member data between a **CSV file and MongoDB**, logging payment status discrepancies and automating data integrity checks.

Software Test Engineer, *Christie Digital Systems Inc.*   09/2023 – 12/2023 | Kitchener, Canada
- Designed and executed test cases, logged **5** critical defects before MicroTiles LED latest software release.
- Enhanced and debugged a testing tool, CAWS which automates web UI testing, thus achieving **95% code coverage (Python and Selenium).**
- Developed a **Python** utility tool, facilitating the efficient file format conversion for EDID files (.bin to .txt).
- Pioneered a log monitoring tool in **Python (PyQt5)** that establishes live telnet sessions to monitor and displays the logs in a table, improving efficiency and accuracy in testing phases by **40%.**

PROJECTS

LinguaStream, *HawkHacks 2024*   05/2024 – 05/2024
- Designed and developed the front end of LinguaStream, a web application capable of translating YouTube video audio into any language of choice, using **React** and **Chakra UI**.
- Integrated the front end with the back end which was built using **Flask** to ensure seamless data flow and functionality, end-to-end API calls tested using **Postman**.
- Built and integrated an **AI chatbot** with **Google Gemini** to answer user questions about the videos.

Virtual Bookstore ⬈   01/2024 – 04/2024
- Developed a **full-stack** online book store application; using **React** to develop the frontend interface, leveraging **MongoDB** for database management and utilized **Express.js** and **Node.js** for backend functionalities.
- Employed **Postman** for API testing to ensure the validation of endpoints of the application.

CC3K Game ⬈   07/2023 – 08/2023
- Developed a multi-level game in **C++** using different **design patterns** (Decorator, Factory, MVC).
- Implemented Character and Item Generation using the **Factory Design Pattern** and **OOP concepts,** increasing the **modularity** of the code and **scalability** of the game's system.

MIPS Compiler, *Written in C++* ⬈   01/2023 – 04/2023
- Developed a **compiler** in **C++** to convert a C-like programming language into **MIPS assembly language**.
- Utilized **DFAs and regular languages** for efficient parsing, type checking and translation.
- Implemented **data structures** while incorporating **OOP concepts**, **optimizing** code processing by **50%**.

ASL Hand Signal Translator   09/2021 – 12/2021
- Built a device that recognises sequences of hand signals and constructs English sentences using a machine learning model that was trained to **95%** accuracy.
- Wrote a **python** script to capture and process images on **Raspberry Pi** efficiently.

EDUCATION

University of Waterloo,   09/2021 – 06/2026 | Waterloo, Canada
Candidate for Honours Bachelor of Computer Science, 3B Term