Ruiquan (Richard) Su

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EDUCATION

University of Waterloo — Waterloo, ON
Computer Engineering, Hon. Coop, President's Scholarship with Distinction, GPA: 4.0/4.0 — *Sept. 2024 - Present*

EXPERIENCE

Control Software Developer — January 2025 - April 2025
SIOUX Technologies (Asia), Jiangsu Industrial Technology Research Institute (JITRI) — *Suzhou, China*
- Cut on-site average deployment time **from 98 hours to 20 hours** by designing and developing concurrent **streamlined installation and upgrade processes** for all software products, significantly reducing manual overhead via **CICD pipelines** and **scripting automation** for installations and boot configuration.
- Designed **standalone executable installers** for all products, allowing users to **independently install** updates.
- Refactored existing services into **organized packages** and developed **Blazor-based API controllers** to automate installations and sync updates online, enabling **direct customer access** and streamlining operations.
- Improved commit verification by building a **CICD tool** that **checks recent Git commit** logs, and performs **rollbacks** on non-conventional commits, and authored comprehensive **documentation** for commit convention.
- Organized and led **company-wide Git training sessions** to enhance version control proficiency across teams.

Software Engineering Intern — June 2023 - September 2023
Capital Air Ltd., Beijing Capital Group Co. — *Beijing, China*
- Developed a **Python-based data analysis system**, visualizing **country-wide air** quality using the **Gaussian regression method** based on the data collected from **over 1,000 sites.**
- Developed a **PostgreSQL port** of the data analysis system using **Flask**, used online by over **2,000 clients**.

Core Member — September 2024 - Present
Wat.AI Student Design Team — *Waterloo, ON*
- Responsible for developing a web-scraping software with an AI module summarizing scholarly articles.
- **Designed a UI** for the internal user of the software using **React and JavaScript**.
- Used **React and Node.js** to build a **responsive interface** for effective site navigation for users.

PROJECT SELECTION

QuickSilver | *Python, Socket, IPAddress, re, pybluez* — April 2025 - May 2025
- Built a **broadcaster** that sends the IP address, name, OS, MAC, and broadcast time in JSON format to **every machine in the LAN**, and a receiver that listens for all broadcasts on the LAN and organizes the information received based on OS types before returning it to the user.
- Built a file **sending and receiving system** via a **TCP connection** that allows the user to **freely choose** the target device (any broadcasting device in the LAN) and target file on the sender end, and a system to **validate** the file on the receiver end.
- Developed an alternative system via **Bluetooth** to accommodate situations **without internet connection** that sends and receives files via **an RFCOMM port**, and retains the **same functionalities** as the TCP system.

Admissions Database | *Python, PostgreSQL, PHP, Raspberry Pi, Docker, Caddy* — January 2022 - February 2023
- Developed a **Raspberry Pi-based data storage & editing system** with **Python and Caddy**.
- **Customized a login system** based on the needs of the Rothesay Netherwood School Admission office.
- Collaborated with the admission team to improve relevant features, serving **325 students** each year.

WatIsLife | *Python, JavaScript, React, Flask, GSM* — December 2024 - January 2025
- Developed a **web API** that **records** the user's speech and uses **Google Speech Module** to count how many times a certain phrase was said and **stores** the count in a **database**.
- Built a simple **React front-end** that displays a **leaderboard** for all users.

TECHNICAL SKILLS

Languages: Python, C/C++, C#, SQL (Postgres, MySQL), JavaScript, HTML/CSS, Powershell, YAML, Batch
Communication: English, Mandarin, French
Developer Tools: Git, Docker, VS Code, Visual Studio (msbuild), Jupyter, Anaconda, Node.js, React, NSIS, NuGet
Libraries: pandas, NumPy, Matplotlib, Cartopy, Tkinter, PyKrige, Flask, Tensorflow, sklearn, Socket, spacy, PyPDF