FRANK WU

Candidate for Bachelor of Software Engineering 2023
90.52 Cumulative GPA / Dean's List x 4 terms

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🔗 xenown
in frankwuhoo

★ SKILLS AND TOOLS

Languages/Frameworks: C/C++, Java, Python, SQL, JavaScript, React, NodeJS, CSS, HTML
Tools/Platforms: Git, CMake, Clang Asan, Docker, Linux, GCP, gdb

⚑ WORK EXPERIENCE

Cloud Database Software Developer   Sept 2020 – Dec 2020

SAP Labs Waterloo

- </> Introduced **SSH port forwarding** to execute end to end tests on IQ (**Docker-**based distributed database)
- </> Implemented the login policy segregation feature with **SQL**, **C++** and **Python**, allowing SAP to control customer login requirements while respecting customer privacy on **100+** production IQ deployments
- </> Identified and fixed a critical connection parameter exploit with the IQ login process affecting **all** users
- </> Wrote an approved **3000-word** technical document, outlining the necessary behaviour and architectural changes for the above feature

Client Interfaces Database Software Developer   Jan 2020 – Apr 2020

SAP Labs Waterloo

- </> Created a **Windows/Linux C++ Wireshark** plugin for dissecting SAP HANA protocol (**TCP**-based) packets to help developers resolve customer escalations faster and track query response times
- </> Wrote performance tests and removed execution bottlenecks, leading to a **10%** faster fetch time using the HANA command line interface on varchar tables
- </> Developed a new **Java** software pipeline to record failed CI tests and track failure frequencies to reduce developer root cause determination time
- </> Identified memory leaks with **Clang Asan** and proposed an improved behaviour for lob queries which enables faster bounded lob fetches

Software Developer   May 2019 - Aug 2019

Cisco Systems Canada

- </> Built a **React** web tool with **Flask** from scratch to configure and compare **Google RPC** and **Model Driven Telemetry** router outputs featuring conditional rendering and dynamic front-end JSON file construction
- </> Introduced **multi-threading** for router connections to reduce testcase setup time by **70%**
- </> Wrote **Pytest** unit tests/test cases to verify parsing accuracy, **IPv6 segment routing** behavior and **BGP** and **Bundle** statuses

⚙ FAVOURITE PROJECTS

KPopify 🔗   August 2020

- </> A specialized **GCP**-deployed platform for watching Kpop music videos and creating playlists. Implemented all changes needed in the stack for the search results feature with **Node**, **PostgresSQL** and **React**.

GoSushi 🔗   August 2020

- </> Adaptation of Sushi Go Party! board game. Conceptualized and implemented **React-Spring** card animations and introduced stateful player reconnection to the **Socket.io** server. Deployed here!