Ju Hong Kim

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EXPERIENCE

Blackberry - Student Systems Software Developer   May 2023 - August 2023
- Investigated the feasibility and benefits of introducing Protobuf and Avro into the data pipelines which found a 50% reduction in data size and decreased transmission time per message by a few milliseconds
- Simplified Gitlab Pipeline rules to enhance readability and maintainability
- **Languages, Tools, and Environment:** C, Bash, Gitlab, Protobuf, Avro, Fluent Bit, Kafka, Ruby

Blackberry QNX - Student Support Developer   January 2022 - April 2022
- Advised clients on their technical problems from debugging to design relating to QNX, POSIX C, and Momentics IDE to enable customers to remove blockers in their development cycle
- Resolved technical challenges encompassing compilation, API/utility usage, networking, and debugging
- **Languages, Tools, and Environment:** C, SVN, Git, GDB, QNX, and Momentics

IBM Canada - Db2 Build DevOps Developer   July 2020 - August 2021
- Improved developer productivity through the development, debugging, and enhancement of build infrastructure and automation tools, streamlining the development pipeline
- Mentored interns and junior team members, supporting their professional growth and performance
- **Languages, Tools, and Environment:** Perl, Node.js, Python, C, Linux/UNIX, Git, Clearcase, and Jenkins

IBM Canada - Db2 Build DevOps Intern   May 2018 - August 2019
- Ensured the regular release of Unix and Linux nightly and special builds for Db2
- Supervised server migration to eliminate blockers and minimize downtime
- **Languages, Tools, and Environment:** Perl, C, PHP, Clearcase, Linux/UNIX, Jenkins, and Buildforge

Ericsson - Student Assistant to the Standards Advisor   February 2015 - June 2015
- Assisted in configuring and migrating a server

SKILLS

- **Systems Programming**: C with exposure to C++ and Rust
- **Web Design**: HTML, CSS, Javascript, PHP, JQuery, React and NodeJS
- **Database:** SQL and NoSQL (MongoDB and Firebase)
- **Scripting Languages:** Perl, Bash, and Regex
- **Other Programming Languages:** Python and Java
- **Version Control:** Git and Clearcase
- **OS:** Linux, UNIX, and QNX

PROJECTS

- Led a team of students to devise a passwordless continuous desktop authentication system, using a smartphone as a Bluetooth authenticator to replace traditional password-based methods for enhanced convenience
  - Lead developer on the authentication module to continuously authenticate the smartphone via Bluetooth
  - Aided in the development of the Android app to communicate with the desktop via Bluetooth
  - **Technologies and Languages:** C, Kotlin, Linux Bluetooth Library Stack (Bluez), Linux PAM, and D-Bus

- Employed Python for web scraping and Perl for data processing to analyze student enrollment and instructor history, generating JSON data for a web data visualization side project
  - **Technologies and Languages:** Perl, Python, React

- Implemented an assembler in C for a 16-bit architecture to convert Hack assembly to machine code

- Collaborated on the development of a front-end prototype for an existing chemical research patent web application, focusing on improving user experience (UX) by creating an intuitive interface and minimizing user actions
  - **Technologies and Languages:** React, Node.js, and SQL

EDUCATION

Carleton University   September 2021 - Present
HBMath in Mathematics
Activities: Math Teaching Assistant (2022-Present), Web and Content Designer for Math Society

University of Toronto Mississauga   September 2015 - June 2020
HBSc in Computer Science with Distinction, Overall CGPA: 3.35/4