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Sanghyun Park

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EDUCATION

Simon Fraser University *Sep 2021 - Present*
BSc, Computer Science *Burnaby, BC*

SKILLS

Programming Languages:: Java, Python, C/C++, JavaScript, TypeScript, C#,SQL,Kotlin,Spring
Frameworks & Libs: React, Angular, Node.js, Express.js, Flask, Django, Cucumber, OpenCV, Jest, JUnit, Tkinter
Software & Tools: MySQL, Docker, Kubernetes, AWS, Git, Github Actions, Jira, Confluence, VS Code, Pycharm

TECHNICAL WORK EXPERIENCE

Software Developer Intern *Apr 2024 - Aug 2024*
enodam Co., Ltd. *Asan-si, South Korea*

- Developed and planned a communication interface for battery maintenance systems using **TCP/IP** protocols, establishing a reliable Ethernet connection between maintenance units and battery devices, resulting in improved data transmission stability and enhanced system reliability.
- Integrated a **PCAN** system to receive and display cell voltages and warning/fault messages from a BMS on a **Python GUI** by parsing hexadecimal data from the **PCAN** device, resulting in improved diagnostic capabilities and enhanced reliability and efficiency of the battery management system.
- Developed a data processing system for **battery management systems** (BMS) data using **Python**, preprocessing data to filter errors, remove duplicates, and extract relevant metrics, and saving the processed data to CSV files, resulting in a streamlined workflow, enhanced data accuracy, and improved reliability and efficiency of BMS monitoring.
- Developing **Pulse Width Modulation** (PWM) functionality using the **MCU** STM32F429I-DISC1, programming the microcontroller using **C** to generate precise PWM signals for controlling various components, resulting in improved control accuracy and system performance.

Freelance Software Developer *Feb 2023 - Nov 2023*
Smart Construction Equipment Management *Vancouver, BC*

- Developed a sophisticated equipment management web application using **React** for frontend with **Jest** and **RTL**, automating tests to ensure the integration of visual components and the dynamic view changes depending on backend output.
- Developed a Login/Signup component handling user registration via email, with additional options for login using Google and Facebook, providing more options to enhance user accessibility.
- Implemented User Authentication with **Firebase** Authentication, ensuring persistent login session until user-initiated sign-out, improving user experience.
- Designed and implemented a frontend search feature to dynamically generate query string to fetch collections from the Cloud Firestore database, significantly minimizing code redundancy and enhancing efficiency across 15+ webpages.
- Developed a visual geo map component utilizing the **Google Maps API** to dynamically display the locations of stored equipment from our database as pins on the map, enhancing real-time visibility and operational tracking.

TECHNICAL PROJECTS

Kogo Mobile | Github🔗 |Link🔗 *Feb 2024 - Present*

- Collaborated in a team of 4 to develop a high-availability **mobile app**, designing a system with a robust **Kotlin Spring Boot** backend, a responsive **React Native** frontend, and **AWS Lambda** for cost-optimized serverless functions
- In charge of creating the **frontend** of the app using **React Native**, creating 16+ components and 10 screens, utilizing **Storybook** for UI component testing and **MSW** for mocking API responses, ensuring robust functionality and enhancing user satisfaction.

Macm316 |Demo🔗 Github🔗 *Jan 2023 - Mar 2023*

- Developed a Numerical Method Visualization tool utilizing **React** and **MathJax** to help easily visualize and plot numerical methods in Numerical Analysis.
- Implemented complex mathematical computation functions such as Simpson's method in a functional programming style using JavaScript, to optimize code readability and calculation efficiency.

SFU Rate My Professor | Github🔗 *Sep 2021 - Jan 2022*

- Developed a Chrome Extension that displays professor ratings on SFU course registration pages, employed **test-driven development** (TDD) using **Jest** to create a reliable tool that enhances student decision-making by providing immediate access to course and instructor reviews.
- Enhanced user experience and functionality by automatically retrieving course and professor information from SFU's academic calendar and Rate My Professor on a semester-by-semester basis, ensuring dynamic and up-to-date data integration.

VOLUNTEERING

SFU OS (Open Source) Development Club | 🔗 *Jan 2023 - Present*
Co-Founder & Senior Developer

- Co-founded a student-led software development club with over 150 initial members to provide hands-on skill development opportunities, successfully leading 4 technical projects with teams of more than 30 students.