

# JACKY LIM

## Education

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### Simon Fraser University

Bachelor of Science in Computer Science and Mathematics

- Awards: Dean's List 2023-2024

December 2024

Burnaby, Canada

## Experience

### Software Engineering

September 2024 – April 2025

*Microchip Technology*

Burnaby, Canada

- Engineered **Python** tools for firmware debugging, reduced debugging time by 25% and enhancing system observability.
- Strengthened **Jenkins** CI/CD pipelines with error handling, increasing pass rate by 30% for software releases.
- Integrated crypto algorithms to validate secure boot with **SoftHSM**, enhancing firmware security and data integrity.
- Implemented **Pytest** for automated firmware testing, ensuring validation with pre-merge checks for all developers.
- Developed APIs for data exchange between controllers, using SWIG for **C/Python** integration.
- Authored documentation for Firmware and Python debugging tools to facilitating team utilization.

### Software Quality Assurance Analyst

September 2022 – April 2023

*Gravit-e Technologies*

Vancouver, Canada

- Revamped Postman API tests (**JavaScript**), improving backend error detection in key web workflows by 25%, enhancing web application stability.
- Automated web UI tests with Katalon Studio (**Java**), ensuring seamless UX & reducing production bugs by 20%.
- Developed **MySQL** database integration tests, ensuring data integrity across web app, improving data reliability for user features and minimizing data-related incidents.
- Collaborated with developers to ensure comprehensive test coverage, improving overall quality of UI & API integration points, leading to a more robust application.

## Projects

### AvidlyDo | Python, Java, TypeScript

- Developed a task management collaboration platform using **Next.js**, enhancing productivity with a user-centric design.
- Reduced deployment time on by streamlining **CI/CD workflows with Google Cloud Build and Docker**.
- Designed a **scalable microservices architecture using Spring Boot and FastAPI, backed by Firestore NoSQL** for robust data management and Firebase Authentication for secure API endpoint access.

### DataHub Collector | Javascript, SQL

- Innovated a full-stack high-performance web-based data storage solution, prioritizing speed and scalability.
- Utilized **React and Bootstrap** to create a highly responsive user interface, enhancing end-user engagement.
- Built high-performance web app using **Node.js, MongoDB, and PostgreSQL on Apache server. Enhanced security with SFU CAS API** for a seamless system.

### SmartBus Alert System | C, Embedded Linux on ARM Processor

- Architected a dynamic bus notification platform, integrating **Translink API** for real-time updates on LCD display.
- Integrated **NFC/TTS technology** to provide personalized alert settings, enhancing user convenience and satisfaction.
- Implemented **multithreading and utilized I2C and SPI protocols** for real-time data handling.

## Certifications

### AWS Certified Developer - Associate

August 2024

Amazon Web Services (AWS)

## Technical Skills

**Languages:** Python, Java, C, C++, JavaScript, TypeScript, Groovy, HTML, CSS

**Web Technologies & Tools:** Docker, Jenkins, Node.js, React, Bootstrap, Git, Postman, Kubernetes

**Databases/Services:** PostgreSQL, MySQL, MongoDB, GCP, AWS, REST APIs, Jira, Confluence