Quinn Paterson

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Summary

Versatile software developer with deep expertise in embedded systems and hardware-software integration. Experienced in developing embedded code for medical, industrial, and multimedia devices, designing IoT-based testing systems, and automating hardware verification for aerospace applications. Strong background in C, Python, Java, and Kotlin, with hands-on experience in MCU communication, sensor integration, and real-time embedded development. Passionate about solving complex technical challenges and contributing to impactful, cutting-edge projects

Education

Bachelor of Engineering, Software Engineering
Graduated Spring 2021
University of Victoria, Victoria, BC

Work Experience

R&D Test Engineer,   May 6, 2024–Sept 23, 2024
Schneider Electric
- Used Python to establish and expand test automation suite for upcoming hardware project.
- Developed libraries for handling communication with MCU bootloader, BACnet communication and microcontroller for electrical inputs.
- Worked with machine vision library to process images for testing.
- Used requirements to develop test suite, test plan, and test framework for upcoming hardware system.
- Designed a hardware rig for testing various electrical, software and mechanical inputs and outputs as well as integrated system testing.

Test Software Developer,   Jan 26, 2023 - May 6, 2024
MDA Space
- Used Python to automate the control of various pieces of hardware to perform verification on satellite parts.
- Worked with numerous groups / stakeholders to gather requirements, develop software and provide continuous support.
- Wrote code to communicate between various devices on network using TCP/IP Serial, Telnet, SCPI and other communication protocols.
- Wrote CI/CD code to assist with deploying software between a wide variety of machines, and to automate regular performance of testing.

Embedded / Android Developer   Sept 28, 2021 - December, 2022
Medipense
- Worked to develop and refine features for an Android based real time medical assistance device. This development was done in a mix of Java and C.
- Was responsible for planning and developing the complete implementation of a safety sensitive android pill tracking application developed in Kotlin following Google architecture recommendations including asynchronous features, database development, and long-running processes.
- Developed a large suite of automated tests to expand coverage of pre-existing features, as well as full coverage of all new app features.
- Wrote driver code for integrating new hardware pieces in C including new screen and mechanical delivery mechanism, debugged pre-existing code.

Full Stack Developer   Sept, 2020 - Sept 2021
Spontaniius

- Founded a team of student volunteers and managed project in order to create an Android application.
- Documented APIs, architecture, mockups and requirements for application
- Developed frontend through Java / Kotlin, developed back end using Node.js and PostgreSQL.
- Designed and implemented a microservice-based, serverless backend on AWS (Lambda, RDS-PostgreSQL, Cognito)

Middleware Development co-op   Feb 1, 2019 - August 30, 2019
ICBC
- Created an internal web application for updating documentation for connections between services using Sharepoint as its backend. Developed using HTML, CSS, JavaScript, Angular.
- Worked to migrate discrete services into a system bus for easier long term support.
- Created an automated testing package to maintain future quality for the internal application. Taught automation to others.
- Created customized Splunk dashboards for various error types.

Quality Engineer
Millson Technologies   September 25, 2017 - December 22, 2017
- Designed and implemented a comprehensive automated testing system for multimedia device controller using C#, also an automated test suite / reporting system using Selenium, Nuint.
- Debugged multimedia embedded system, and added new features using C.
- Prototyped and documented implementation of IoT features into multimedia device.
- Developed a web interface to control IoT devices.

Dev Support QA
Electronic Arts   January 21, 2017 - September 25, 2017
- Used Python to create tools to improve quality of work including web crawlers, and a browser tool for opening a website across all locales
- Automated hundreds of front end test cases using Java, Selenium and Junit.
- Worked with various teams by writing various error fix tickets, performed followup with developers to clean backlog and refine priorities.
- Used Postman to perform crud API testing, used Junit for further automation
- Wrote hundreds of test cases and created test suites for existing and new EA Games websites, including EA Sports Websites and Starwars Battlefront. Searched for errors and debugged using HTML, JavaScript and CSS Inspection.

Technical Skills
- Programming Languages:C, C#, Java, Kotlin, Python, HTML, CSS, MySQL, PostgreSQL, JavaScript
- Software: Gitlab, Github, JIRA, TestRail, Confluence, Microsoft Visio, Unity Engine, Android Studio, Eclipse, NetBeans, Splunk, PyCharm, Microsoft Office Suite
- Packages and protocols: Selenium, Pytest, Modbus, SCPI, Telnet, IP/TCP
- Documentation: Confluence Pages, Technical reports, QA Reports, Requirements documents
- Languages: English, Native; French, Intermediate