Quinn Paterson

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Bachelor Of Engineering, University of Victoria, 2021

Professional 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

Work Experience

Independent Software & Game Developer   **Nov 2024 – Present**
- Rebuilt a 14-page Android social app, transitioning it to a modern MVVM architecture, implementing GIS-based features, authentication, and user collectibles.
- Refactored backend from AWS Lambda to FastAPI, consolidating services and implementing a suite of 50 automated tests to improve reliability.
- Designed two strategy board games, focusing on mechanics balance, player interaction, and strategic depth.
- Learned React and built a personal website to showcase projects and professional 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 the project in order to create an Android application.
● Documented APIs, architecture, mock-ups 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 follow-up 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 Star Wars 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