

Jake “JJ” Bowen

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Summary

Experienced embedded engineer and automation programmer with a passion for problem solving and a love for simplifying and streamlining complicated processes with creative and efficient solutions.

Education

Master of Science University of California, Santa Cruz GPA 3.82 Computer Science and Engineering	9/2022
Bachelor of Science University of California, Santa Cruz Computer Science	6/2021
Bachelor of Art University of California, Santa Cruz Economics	6/2021

Work Experience

- Embedded Software Engineer II** | RTX Corporation 9/2023-Present
- Telemetry expert on an embedded software engineering team. Developed & rigorously tested performance-critical interfaces using modern C++ for aerial control surfaces and sensors on an experimental military project, helping to progress from an early prototype to flight-ready status in less than 4 months.
 - Automation specialist on the same team, implemented Python based automation tool and CI/CD pipelines in Azure DevOps for test automation of embedded software, contributing to improved reliability and continuous monitoring of complex, multi-component systems.
 - Participated in and led field test event for sensitive and safety significant hardware
 - Researched and integrated an Electro-Optical Sensor Model (EOSM) for a digital scene generation team.
 - Implemented Continuous Documentation into a CI/CD pipeline as part of a DevOps team.
- Information Security Analyst** | University of California, Santa Cruz ITS 12/2021-07/2022
- Student job on ITS Core Technology- Infrastructure Security Team, analyzing vulnerabilities and investigating/responding to incidents at a major research university.
 - Worked with open-source projects, vendor APIs, and code with limited documentation and support.
 - Focus was on enhancement of security tools, alerts, and data analysis.
- Software Engineering Intern** | Nuix North America, Inc 10/2020-7/2021
- Created JavaFX application to test native C++ API
 - Developed stand-alone application using JavaFX to make and view file safes.
 - Created UI layouts with Scene Builder, including associated Controller classes.
 - Developed Interface classes to access the native C++ DLL using JNA.
 - Used the Java Document class to read and write test configuration files in XML.

Key Skills

- Languages: Java, JavaScript, JavaFX, C, C++, Python, HTML, XML, Ruby, React, Make, SQL, PlantUML, Perl, CUDA, Yaml, Bash
- Software: GitHub, ADS, Microsoft Office, Eclipse, Notepad++, Google Suite, PuTTY, Remote Desktop, Docker
- OS: Windows, Unix/Linux, VxWorks
- DevOps, Automation, and CI/CD Pipelines
- Embedded Programming
- Mobile Development
- Talent for recognizing improvement, and designing creative and efficient solutions
- Experience in GPU programming using CUDA
- Curious and solutions-oriented problem solver
- Object-oriented programming
- Live field test experience

Research

- GPU Programming** | University of California, Santa Cruz | 1/2022 – 9/2022
- Researched running graph algorithms, particularly PageRank and Single Source Shortest Path, on CPU, GPU and heterogenous kernels, as well as embedded devices.

Volunteer Experience

- Teen Volunteer (TWG)** | Oakland Zoo - Oakland, CA | 06/2011 - 09/2017
- Educated zoo visitors about animals, their habits, natural environments, and conservation issues.
 - Multiple Presidential Volunteer Service Awards for hundreds of hours of volunteer work.