Jonathon McCullough

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Work Experience

Systems Engineer (CNS – Loadable Software) (Lvl 2)

Feb 2020 – Present Everett, WA

- Cabin Video Monitoring Service (CVMS) Development: Developer for CVMS team, working under direction to develop new features, resolve outstanding issues, and provide engineering support to meet project deadlines (customer commitments, Flight Tests, etc.).
- Bifrost Engineering & Support: Provides support the Bifrost software team by documenting processes, lab
 infrastructure, and other system elements. FUTURE: engineering support in the form of active
 development work, issue resolution, and new feature implementations.

Boeing
Systems Engineer (CNS – Innovation) (Lvl 2)

Feb 2019 – Feb 2020

Everett, WA

 Developed a User Interface for demonstrating Smart Search hardware capabilities for purposes of demonstrating the project in VCabin. Involved C#/Android development for the UI and some C programming for tweaking the firmware.

- Generated requirements and helped charter Agile Trade Decisions for NMA Onboard/Offboard Connectivity team.
- Participated in cybersecurity Incident Response. Work involved source code analysis, aggregating and analyzing CVEs and relevance/potential impact to system.
- Developed a prototype User Interface/API client for 787 Cabin Services Systems team for demonstrating capabilities of their prototype REST API server. C#/UWP programming.

Hubbell Power Systems
Associate Product Engineer (Utility Automation)

Jan 2016 – Jan 2019

Leeds, AL

- Product line responsibility for distribution voltage protection equipment and supporting communication modules (WiFi, 900MHz, SCADA via DNP3 over cellular/ethernet/RS232). Involved in full product life cycle, from initial design to market introduction, maintenance, and EOL.
- C#/WPF programming for creating manufacturing scripts, customer-facing GUIs. Regression testing and development of system test plans for updates to existing product interfaces.
- C firmware development/testing for cell modem add-on option.
- Testing and support for product firmwares (ARM Cortex M4 and MSP430 platforms). Development of
 work scopes for firmware updates, architectures for new products, regression and system test plans for
 validating firmware releases.
- Led a project to coordinate with Underwriter Laboratories to perform cybersecurity assessment of product hardware/software. Generated report out and remediation plan to address identified issues.
- Experience with standard suite of electronic test equipment, e.g. oscilloscopes, logic analyzers, multimeters, network analyzers, as well as specialized test equipment for high-voltage (up to 200kV) and high-current (up to 8kA) standards testing.

Education

- Lead Capstone Project team which developed a WiFi-based mesh network of sensors that monitored the occupancy status of a parking lot.
- Contributed to the UWF SmartHome Research Project, helping to implement an Arduino based wireless sensor network platform to interface with the project database.

Skills: C, C# (.NET) programming languages. DNP3, MODBUS, IEC 61850 SCADA protocols. Development and testing for WiFi, 900MHz, Cellular TCP-IP communication platforms. P4/Git/SVN version control. Component-level electronics troubleshooting, Limited experience with SQL, VHDL, analog design, C++, VB.