

Stephen D Murphy

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EXPERIENCE

Embedded Software Engineer

Glassboard - Indianapolis, IN

June 2019 - Present

- Writing embedded firmware for ARM M0+, M4 and M7 cores from Atmel, Nordic, NXP and ST
- Developing IoT applications in C, C++ and Python to be deployed to wireless battery powered edge devices
- Creating GUI applications for product control, data capture and testing in ElectronJS, C# and GTK+
- Utilize Bluetooth and WiFi communication to provide wireless connectivity to IoT devices
- Implementing Amazon Web Services (AWS) for IoT device management, data collection and storage
- Implement embedded firmware unit testing using the Ceedling framework (Unit & CMock)
- Utilize Github CI/CD to deliver consistent, tested applications to embedded devices
- Documenting system architecture, device design, and product use instructions
- Collaborate with other engineering competencies and program management to deliver high quality products to clients

Firmware Engineer

Allegion - Carmel, IN

January 2017 - June 2019

- Developed real time embedded systems using FreeRTOS and MQX
- Designed and implementing new firmware on ARM M0+ and M4 Cortex microcontrollers
- Debugged firmware using tools such as the Keil ULINK Pro2 debugger, Salae Logic Analyzer, TotalPhase Beagle Protocol Analyzer, and the TotalPhase Aardvark Host Adapter.
- Applied Agile-like practices within VSTS (Visual Studio Team Services / Azure DevOps)
- Utilized Git for source revision control and Azure DevOps as the remote repository location

Firmware Engineering Intern

Allegion - Carmel, IN

May 2016 - August 2016

- Assisted in firmware development, testing, and debugging of Microchip and NXP (Freescale) MCUs
- Revised and further developed an in-house tool using C++ to generate firmware packages for multi-processor targets
- Aided in piloting and implementing Visual Studio Team System (VSTS) to explore the effectiveness of transitioning all future projects to VSTS for project management, source code version control, and test case management

EDUCATION

(B.S) Electrical & Computer Engineering Technology

Purdue University - West Lafayette, IN

August 2012 - December 2016