John Heizer
Embedded Firmware Engineer

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Competencies

Programming Languages	C, C++, C#, LaTeX, Python
Frameworks and Libraries	ChibiOS, FreeRTOS, MbedOS
Development Tools	Atmel Stduio, Clang Tools, git, GitHub, make, vim, Visual Studio Code
Operating Systems	Apple macOS, Microsoft Windows, Ubuntu Linux
Microcontrollers	ARM Cortex-M, Atmel AVR, Microchip PIC

Education

Graduated May 2009

Bachelor of Science — Fort Collins, CO
Colorado State University

Primary Major Computer Science
Secondary Major Mathematics

Experience

Feb. 2019 – Jul. 2020

Electronics Engineer II — Wheat Ridge, CO
Cimarron Energy

- Instituted a code review policy.
- Created internal production software for programming and verifying a product line.
- Refactored codebase to support product variation development.
- Involved in the research, planning, and architecture for the next generation product line.
- Created a proof of concept for the next generation product line.
- Implemented continuous integration with format, lint, unit test, and integration test checks on an in-house server.
- Wrote drivers and supporting library code for next generation products.

ARM Cortex-M · Atmel Studio · C · C++ · C# · ChibiOS · Clang Tools · FreeRTOS · GitHub · Ubuntu Linux · MbedOS · Python3 · Qt · Visual Studio Code · Yocto

Sep. 2014 – Feb. 2019

Embedded Firmware Engineer | Software Engineer — Lafayette, CO
Clear Blue Engineering

- Created the initial firmware for an embedded device for water sterilization.
- Developed the firmware for an ARM based IoT device to measure and control power consumption in residential and commercial settings.
- Ported an embedded device to a PIC microcontroller.
- Involved i the development of a HIPAA compliant telemedicine application.
- Designed and 3D printed manufacturing jigs and fixtures.
- Modified a 3D printer to continuously print a single object and deposit it into a bin.
- Created the PCB layout for a company Maker Faire project.

Android · ARM Cortex-M · BitBucket · C · C++ · CircuitMaker · FormLabs · Java · JavaScript · Microchip PIC · MPLAB X · OnShape · Particle.io

Feb. 2010 – Jul. 2012

Software Engineering Contractor — Lafayette, CO
Clear Blue Engineering

- Created an Android application which communicated with a SOAP API backend.
- Extended early versions of Android with Arabic text reshaping.
- Created a .Net application that communicated with a backing web API and translated received data into a custom format usable by an embedded device.
- Interfaced with clients to determine product specifications, design goals, time tables, and bug fixes.

Android · C# · Gson · Java · Visual Studio

Nov. 2005 – May 2009

Student Data Specialist | Student IT Professor I — Fort Collins, CO

Denning Research Group

- Maintained computing resources including storage servers, computing clusters, and NFS servers.
- Helped design a new computing cluster according to requirements set by the research group.
- Helped transition servers to use LDAP authentication.
- Increased storage capacity to meet the growing demand for larger cluster output data.
- Reorganized network switches to increase throughput, provide fault tolerance, and make management easier.
- Upgraded servers with lights-out management functionality.

DRBD | CentOS Linux | Debian Linux | LDAP | NFS | Sun Grid Engine