Christopher J. Woodall

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Technical Skills

Hardware: General test bench (multimeter, oscilloscope, & signal generator), FPGA design (Xilinx), Microcontrollers (ARM & AVR), VLSI layout (Cadence), PCB layout, schematic capture (KiCAD & EAGLE), & soldering.

Software: C, C++, Python, Shell Scripting, Linux, Git, MySQL, Javascript.

Experience

Student Engineering Technician January 2011 - Present
Boston University Electronic Design Facility Boston, MA

- Designing scientific instrumentation & test equipment for physics experiments.
- Assembling PCB boards for my own designs & others.
- Testing & verification of designs using multimeters, signal generators & oscilloscopes.
- Focused on FPGA design using VHDL & Xilinx ISE, & PCB layout using KiCAD & ExpressPCB.

Electronics & Data Acquisition Lead July 2012-Present
Boston University Rocket Propulsion Group Boston, MA

- Testing & designing electronics for hybrid rocket data acquisition & control systems.
- Making design documents, cost estimates a priority in order to keep a group of other student engineers organized.
- Designing pressure regulator for the N_2O fuel tanks using an actuated valve, pressure transducer & microcontroller.

Vice President May 2012-Present
Boston University Information Lab & Design Space (BUILDS) Boston, MA

- Responsible for running meetings, maintaining an electronics bench & keeping project logs.

Education

Bachelor of Science in Electrical Engineering Expected May, 2014
Boston University Boston, MA

- **Current GPA:** 3.77 on a 4.0 scale
- **Past Coursework:** Digital Signal Processing, Electromagnetic Systems, Signals & System, Intro Electronics, Intro Logic Design, Software Engineering & VLSI.
- **Current Coursework:** Algorithms, Control Systems, Analog Electronics & Embedded Systems.

Technical Projects

Firestarter: Measurement & Igniter Board [ARM, C, Analog Filters, PCB Layout]

- ARM-based data acquisition & e-match firing board for starting ignition in a hybrid rocket & measuring tank pressures.
- Experience with designing analog-to-digital signal paths & active filter design.

Artemis Synthesizer: A Music Synthesizer Kit [AVR, C, PCB & Schematic Layout]

- A music synthesizer & sequencer, design as a soldering exercise for a women in technology outreach program.
- Experienced short turn electronics design for a quantity of 50, which required assembly instructions and documentation.

BUILDSbot 12 Ounce: A Line Following Robot [AVR, C, Motor Control]

- Using the Arduino development board as a platform created a basic line following robot. Utilized AVR-C C++

NOMIS: A Simon-like Memory Game [Random Number Generators, C, AVR, PCB]

- Implementation of Simon using an AVR ATTiny85. Prototyped on breadboard & then created PCB.