Christopher J. Woodall

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Technical Skills

Hardware: General test bench (multimeter, oscilloscope, & signal generator), FPGA design (Xilinx), Microcontrollers (ARM , MSP430 & AVR), VLSI layout (Cadence), PCB layout, schematic capture (Altium, KiCAD & EAGLE), & soldering.

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

Experience

Research Assistant May 2012 - Present

Boston University Electrical and Computer Engineering Department Boston, MA

- Designing a PCB board and related software for controlling a 1,024 channel MEMs adjustable mirror for adpative optics using Altium Designer.
- Assembly of SMT PCB boards.
- Testing and verification of design.

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-July 2013

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.

Education

Bachelor of Science in Electrical Engineering Expected May, 2014

Boston University Boston, MA

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

Technical Projects

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.