

Engineering Experience

ClearCorp: May 2014 - October 2014.

New Product Development and Hardware Support

- Primary designer for a new hardware revision of *FlocCounter* water treatment sensor, using Eagle PCB.
- Debugged, refurbished and assembled SMT and PTH boards to be sent to municipal water utility customers.

ITLL Electronics Center: Fall 2013 - Spring 2014.

Electronics Tutor

- Assisted all levels of students with designing, building, and debugging circuits and software.
- Created a tutorial using Altium Designer to show how to design, build, and rapidly-prototype PCBs.

Colorado Space Grant Consortium: Fall 2012 - Summer 2013.

DANDE and All-Star Satellite Ground Segment

- Created commands in Java for sending data management commands on DANDE, Launched 9/29/13.
- Ensured that Linux commanding servers were running and stable for the mission operators.
- Designed communication link using C and C++ for Raspberry Pi data layer with All-Star satellite.

Education

University of Colorado at Boulder

Electrical and Computer Engineering Major with Computer Science Minor

Graduating May 2016

Semester GPA: 3.200 — **Cumulative GPA:** 3.012

Major Coursework: Micro-Electronics; Linear Systems; Circuits 1 and 2; Digital Logic; Introduction to Embedded Systems

Minor Coursework: Computer Systems; Data Structures; Big Data Computing; Introduction to Artificial Intelligence; Human-Centered Design

Projects

Big Data Neopixel (2014) A board to accompany a Raspberry Pi, to connect programmable LED rings, to provide the hardware for a Computer Science group project

Additive Synthesizer with MIDI Control (2013) Capable of outputting the combination of sine, square, or sawtooth waves. Entire project fit on an Arduino shield built in the ITLL rapid prototyping lab.

RC Two-Wheeled Robot with Nerf Pistol (2014) Remote Controlled robot able to drive around and shoot a Nerf dart gun. Controlled using a modified NES controller. Made use of many custom PCBs.

Side Projects Underway (Present) Creating a product to bring the community of Arduino to higher power applications. Also, creating hardware and software for a product to allow group sign-in's at events.

Programming Languages and Skills:

- C; C++; Java; Python; L^AT_EX; Verilog HDL; Assembly; MATLAB; Mathematica; Word; Excel; Altera Quartus II; Geomagic/Solidworks.
- Comfortable working with and maintaining Linux environments, Git and Version Control.
- Experience working with machining tools and making designs to fit tolerances.

Leadership and Activities

ZBT Vice President of Communications (Present) Ensure that brothers of the 100 person organization are aware of events by building a Raspberry Pi slideshow/community board. Worked to debug and upgrade a business-sized Wi-Fi network.

CU Biodiesel Club (Present) Active member, responsible for updating cubiodiesel.org.

Eagle Scout (2010) Planned and led a group of 20-30 people on a project to restore damaged shoreline at Eaglewatch Lake. Had to fundraise and work with business owners to obtain the materials for the project.

References Available Upon Request