Porter, Zachary T

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Objective:

Recently graduated electrical engineer with undergraduate research experience in aerospace technology seeking an entry-level electrical engineering position in the Houston, TX area.

Summary of Qualifications:

- Strong understanding of circuit analysis using oscilloscopes and other lab equipment for analog filters, amplifiers, digital logic, rectifiers, and PV systems (residential-scale and electronics-scale).
- Experience using Altium to capture circuit schematics and design printed circuit boards.
- Proficient with reading and understanding circuit schematics and data sheets for electrical components.
- Familiar with CubeSat technology and aerospace systems.
- Able to design circuits to interface microcontrollers with other digital components, ICs, and sensors.
- Understanding of RTOS concepts and serial protocols (UART and I2C) for embedded systems.
- Programmed Arduino and ARM-based microcontrollers using the Keil uVision IDE.
- Strong knowledge of C++, Python, and other C-based programming languages.

Education:

Bachelor of Science in Electrical Engineering with a Minor in Mathematics
University of Kentucky, Lexington, KY
Graduated Summa Cum Laude with a 3.974 GPA Graduated: May 2015
Senior Design Project: designed a multi rotor UAV system capable of autonomously mapping an archaeological site by capturing still images of the area, and using commercial software, stitched the images together into a 3D model; out of the (12) senior design teams, project was voted the best by the faculty and advisors.

Work Experience:

University of Kentucky, Lexington, KY **Feb 2015 – July2015**
Student Researcher, Space Systems Lab (worked 15-20 hours/week while in school full time)

- Redesigned the electric power system (EPS) of the previous university built CubeSat KySat-2 under an EPSCoR grant to the university.
- Designed a new inhibit system for the CubeSat, tested existing components for functionality using standard test equipment such as oscilloscopes and power supplies, and created the new printed circuit boards for the solar panels and EPS using Altium Designer.

CirrusMio Inc., Lexington, KY **Nov 2014 – Feb 2015**
Software Development Intern (worked 10-15 hours/week while in school full time)

- Collaborated with other interns to develop a new ticketing system built using Ruby and Rails to help the company better serve its customers.
- Responded to customer tickets related to company software such as identifying and fixing problems with customer web pages in HTML.
- Helped debug and make minor fixes to maintain large code projects written in Ruby, HTML, and Javascript using Github in a Linux environment.

University of Kentucky, Lexington, KY **Mar 2013 – Aug 2014**
Undergraduate Researcher, Space Systems Lab (worked 10-20 hours/week while in school full time)

- Developed payload for a high altitude balloon launch that utilized an Arduino, GPS, and servo motor to deploy a tray of aerogel for micrometeorite capture and then seal the tray before descending.
- Fabricated printed circuit boards for battery power modules, telemetry chips, and other components; used Altium to design circuits, capture circuit schematics, and design the printed circuit boards.
- Wrote code in Python and MATLAB to process telemetry received from a student-developed CubeSat which allowed for data analysis and monitoring of the satellite's power system.