ANDREW SOUSA

[Contact Info Suppressed for Web] | AndrewSousa.com

An ambitious electrical engineer with demonstrated leadership abilities, robust creative and communication skills, who possesses a passion for embedded systems and electronics with a drive to change the world.

EDUCATION

University of Massachusetts Amherst
Bachelor of Science in Electrical Engineering — May 2015
Master of Science in Electrical Engineering — May 2016
Betterment of the Department Award, Eta Kappa Nu, Abigail Adams Scholarship

WORK EXPERIENCE

Apple Inc., Network Security Engineer (Summer 2014)
- Designed and built a prototype Web Application Firewall (WAF) to protect application services.
- Presented results to directors and CIO; team plans to implement this system and replace current solution.

Verizon Wireless, Network Engineer (Summer 2013)
- Built virtual sites to monitor interfaces between various network components in N.E. distribution center.
- Used PERL, Expect, Javascript, and php scripts to pull diagnostic data from network nodes.
- Presented results to executive directors & managers; data also hosted on internal web interface.

Leaf, Hardware Engineer (Winter 2014- Spring 2014)
- Worked on a start-up team tasked with revolutionizing the way people connect professionally.
- Designed the power management system for the wearable: Nordic MCU and Accelerometer unit.

TECHNICAL PROJECTS

Otto: The Personal Cameraman (Fall 2014 – Present)
- Leading a group of four engineers tasked with designing a drone to follow a user performing an action sport.
- Responsible for all of the drone system hardware; I am designing certain aspects of them.
- Presenting design and progress to a board of faculty advisors periodically throughout the year.

IEEE MicroMouse Robot (Spring 2013 – Spring 2014)
- Lead a group of four engineers tasked with designing a robot that will navigate 16 x 16 maze.
- Focused on inspiring team to concentrate their energy onto primary goals, in order to reach final product.
- Design hardware using Eagle to optimize speed without sacrificing reliability, and formulated algorithm.

VLSI Design & Layouts (Fall 2015)
- Designed a 1-bit accumulator which included majority bit, carry bit, and flip-flop circuits.
- Drew the layout for flip-flop and inverter using cadence software.

Electronics Lab I & II (Fall 2013 - Spring 2014)
- Designed AM demodulator, AC & BiCMOS Amplifier, ring oscillator in PSPICE then analyzed in-lab.
- Built various networks using multiple components including op-amps, logic gates, and CMOS Transistors.
- Designed and built an AM radio with discrete components and presented the term project to professor panel.

Bitcoin Keurig Machine (Spring 2014)
- Enhanced a keurig to be wifi enabled and sense when a cup is on the platform.
- Presented project to all participants and sponsors and was awarded the most innovative at HackBeanpot.

LEADERSHIP

HackUMass 2014: Founding team lead, IEEE Ohm's Synack Shop: Founder, HKN President, SDP team lead

SKILLS

PSpice, Eagle, Verilog, Java, C, Unix, Python, PHP, PERL, Assembly, MATLAB, Arduino(C/C++), HTML, CSS

COURSES

Microwave Engineering, VLSI, Analog Communications, Nonlinear & Linear Circuit Design, Semiconductor Devices

GROUPS & INTERESTS

President HKN, Former Vice-Chair IEEE & ESAC, Ski & Board Club, Hackathons, Skydiving, Fitness