ALEXANDER HOPPE

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SUMMARY

I'm a hands-on, hard-working engineering student at Olin College, interested in exploring the intersection between computer programming and electrical engineering from the front end of websites to the bare metal of electric formula cars.

EMPLOYMENT

May 2017 to Aug 2017 — **Synapse Product Development, Inc.** · Electrical Engineer
- Developed validation testing and lab skills while reducing product power consumption
- Designed cost-down steps for mass-production
- Worked with and presented to clients

Jun 2016 to Jun 2017 — **Olin Electric Motorsports** · Electrical Team Lead
- Successfully lead electrical system design through passing tech and racing at Formula SAE Electric
- Managed design and review workflow of a team electrical engineers
- Designed, fabricated, and tested embedded systems PCBs integrated with the CAN bus
- Co-led electrical and software design of a high-power battery management system

May 2016 to Aug 2016 — **Onshape** · Software Development Intern (Assemblies)
- Worked on the full production stack in C++, Java and JavaScript
- Implemented client-facing features such as Parallel mate
- Fixed priority bugs on both client and server applications

Sep 2015 to Jun 2016 — **Research on Electric Vehicles at Olin (REVO)** · Electrical Team Member
- Designed, captured, and fabricated cockpit dashboard electronics and the underlying PCBs
- Worked with ATMega microcontrollers in C to link sensor and control systems using the CAN bus
- Contributed to general electrical system design, fabrication, overcurrent protection, and the corresponding documentation

2013 to 2015 — **Student Conservation Association** · National Crew Member
- Restored backcountry trails for over 400 hours in North Cascades and Olympic National Parks

SKILLS

ELECTRICAL	Circuit Prototyping, PCB Fabrication, Power Electronics, PCB Design, Embedded Systems Design, Altium Designer, Upverter, Atmel AVR, Circuit Debugging (Oscilloscope, Function Generator, DMM, Spectrum Analyzer), LTSPICE
SOFTWARE	Python, JavaScript, Backbone.js, Git, Test Driven Development, Java, C++, MATLAB, C, Flask, HTML & CSS
MECHANICAL	Onshape, SolidWorks, CNC Router, Mill
MANAGEMENT	JIRA, Asana, Trello, Engineering Mentorship

PROJECTS

Sep 2016 to Current — Third Wave Coffee
I'm a self-taught barista and proprietor of a west-coast style coffee shop I run in my dorm at Olin.

Oct 2016 to Dec 2016 — ReFilament
A 3D-printing filament recycling system built as the final project for Principles of Engineering

Oct 2016 — PID Line Follower
A line-following race robot built as part of Principles of Engineering

Jan 2016 to May 2016 — Morse Code Internet in a Box
A fully student-designed and built seven-layer OSI model of the internet based on Morse code communication

Jan 2016 to May 2016 — Elapse Data Visualization
A data-visualization web app to help users understand how they use their time

Dec 2015 — Listening With Lasers
An apparatus to record sounds from outside a window using a laser, a photodiode, a filter circuit and Digilent WaveForms software

Oct 2015 — The O Watch
An internet-connected LED watch using the Spark Core that won Best Wearable at HackHolyoke 2015

AWARDS

Oct 2015 — Hack Holyoke · Best Wearable