

Education

Olin College of Engineering

Candidate, Bachelor of Science in Electrical and Computer Engineering

May 2018

3.81 GPA

Experience

Amazon Robotics, Software Engineering Intern

Summer 2017

- Member of eight person team developing proof-of-concept robot for warehouse automation.
- Developed software using ROS, wrote software for point-cloud manipulation and filtering, and designed and implemented a large-scale, flexible software system in C++.
- Invented novel point-cloud filtering algorithm.

Onshape, Software Engineering Intern on the FeatureScript Team

Summer 2016

- Designed and implemented various built-in functions for the FeatureScript language.
- Invented and implemented novel autocomplete algorithm for online code editor.
- Challenges included optimizing code, geometric and text-based algorithm development, and working with a large code-base.

Olin Electric Motorsports (fSAE Electric Team)

2014-Present

- Senior Engineer of 40 person electric vehicle club designing Formula Electric racecars for Nebraska SAE competition. Firmware Lead from 2015 through fall of 2017.
- Designed PCBs, wrote firmware, designed large-scale electrical systems, and taught new members about electrical and firmware design.

Audience Inc., Multisensory Algorithm Intern

Summer 2015-Spring 2016

- Built Machine Learning classifiers, developed backend for ML pipeline, developed tools for automating data post-processing and developed software for interfacing wirelessly with Android devices using TCP sockets.

Projects

MIMO Digital Communication Using USRPs

Member of 4 person team which achieved a transmission range of about 12 inches, with an error rate of under 10%.

Designed Adaptive-Biasing Differential Amplifier

Simulated and characterized in LTSpice. Adaptive-biasing was achieved using MOSFET Subtraction sub-circuit for slew detection.

Quantum Computer Simulator in Python

Simulation of 5 fundamental Quantum Logic gates: X, Y, Z, Hadamard and CNOT.

#Hashtag Gloves - Tweeting Smart Gloves

Featured nationally on news outlets such as BuzzFeed and Gizmodo for hackathon project on tweeting gloves

Self-Tuning Guitar Attachment

Member of 5 person team that built a portable device which tunes a guitar automatically. Responsible for Firmware.

Audius78 - Audio Editing WebApp

Member of 4 person team that built a web application in React for editing audio in the browser. Responsible for Audio editing algorithms.

Skills

Proficient in C. Competent with C++, Rust, Python, Javascript and Git. Familiar with Haskell

Firmware development on Atmel AVR microcontrollers

Circuit and PCB design (Altium and KiCad)

CAD software (Onshape, Solidworks, Blender and OpenSCAD)