

EDUCATION

University of Washington

Seattle, WA | Expected June 2016

BS in Electrical Engineering

- EE GPA: 3.7
- Concentration: Embedded Systems

Relevant Coursework:

- Java Programming
- C/C++ Programming & Bash Scripting
- Data Structures & Algorithms
- Embedded Systems
- Control Systems
- Computer Networking
- Web Programming
- Circuit Theory
- Signals & Systems
- Digital Circuit Design
- Devices and Circuits

SKILLS

- Java | C | HTML | CSS | JavaScript
- Git | Verilog | FPGA programming
- Quartus | ModelSim | LTSPICE
- MultiSim | Bash Scripting w/Linux
- Matlab | Simulink | LabView
- Real Time Operating Systems (RTOS)
- Protocols: ARINC 429 | CAN Bus

PROJECT EXPERIENCE

Memory Manager:

- Created a memory management system that implements the malloc and free operations in C.

FPGA programming:

- Tug of War: Programmed a game where two users can play Tug of War on the FPGA board using buttons and multiple LED's. (Verilog)
- Morse code: Programmed a Morse code translating system that allows the user to input a valid Morse code, and outputs the corresponding alphabet. (Verilog)

WORK EXPERIENCE

Engineering Intern | Honeywell Aerospace (June 2015 – September 2015)

- Work in an agile team of engineers to develop, test, and improve avionics systems.
- Developed weather radar software to record, playback, and visualize weather data in real time. (C/C++)
- Developed and tested avionics hardware including Integrated Multi-Mode Receivers and Communication Management Units where I took part in the product development lifecycle (RF Circuits, ARINC 429 Com protocol).

UW EcoCar Engineer (September 2014 – Present)

- Developing software for an open source vehicle infotainment platform that communicates with vehicle hardware to deliver a cutting edge user experience. (Embedded C, RTOS, CAN, JavaScript)
- Utilizing my knowledge of embedded systems and power electronics, I work in a team of engineers to develop a Chevrolet Camaro into an eco-friendly hybrid vehicle.
- Designed an electrical model of the sub-components in the battery pack charging system using Matlab and Simulink.

Undergraduate Research Assistant | UW EE Dept (January 2014 – December 2015)

- Responsible for creating PCB designs using EAGLE CAD, implementing them in lab, and testing circuit boards to see if they perform the intended task using oscilloscopes, DMM's, function generators, and LTSPICE software.
- Developed a Low Dropout Power Regulator from scratch to regulate the power supply to an expensive circuit board. The board is now protected from high voltage, high current, and has reverse current protection.

Bluetooth Controlled Autonomous RoboTank:

- Programmed an ARM based TI Stellaris Microcontroller using knowledge of Real Time Operating Systems to drive a Bluetooth controlled autonomous tank that fully avoids collisions. (Embedded C)
 - Manual Mode: Developed master/slave software to control the microcontroller to drive the tank via Bluetooth.
 - Autonomous Mode: Programmed the tank to move autonomously and avoid all collisions. See it live: <https://youtu.be/dcReAuvuEgM>

Link-It! Web App:

- Developed a web app to teach new computer science students the fundamentals of a data structure, Linked Lists. (HTML, JS, CSS)

Arduino Wi-Fi Garage Door Opener:

- Implemented from scratch an Arduino system to control my garage door. I hosted a private web page on my local network that I can access to open/close the garage door.