

# Anthony R Grigore

## Education

**University of Washington** - Expected Graduation Date: June 2016

- Major in Electrical Engineering, Bachelors of Science
- One of sixteen Direct Freshman Admits into Electrical Engineering

Departmental GPA: 3.80

Cumulative GPA: 3.71

## Work Experience

**The Boeing Company** - Electrical Engineer Intern (Two Summers)

June - September of 2014 and 2015

- In-Flight Entertainment (IFE) and Connectivity Configuration for Boeing 787 aircraft.
  - Ground tested and flight-tested on-board wireless connectivity and passenger entertainment equipment.
  - Created a distributed tool among customer airlines that transforms aircraft fault reports from XML to HTML (Written in XML, HTML, XSLT) effectively improving gate delays for passengers
  - Worked with Microchip and Arduino Uno micro-controllers and a variety of languages (Java, C+, Assembly)
  - Analyzed and presented disruption data within factory assembly in an effort to eliminate recurring installment issues of IFE on 787.
  - Designed and executed personal experiment recording laptop power usage to update Boeing's Personnel Electronic Device (PED) outlets in seats.
  - Worked with Microsoft Outlook, PowerPoint, Word, and Excel.

## Engineering Experience

**U of Washington Hyperloop Research Team –Embedded Systems Lead Engineer** (Current Project)

- Team leader of the official UWashingon Hyperloop team working to design, build, and test a pod for an upcoming competition hosted by SpaceX. As a Systems Team lead my contributions to the team focus on the embedded controls architecture and real-time telemetry acquisition. Additionally, our design was awarded the best safety subsystem during the SpaceX Design Weekend and has been invited to participate in the final stage of the SpaceX Hyperloop Pod Competition.
- Responsibilities have included: telemetry readings, CAN bus architecture implementation, hardware/sensor design implementations, redundant systems, and automatic safety mechanisms.

**U of Washington Autonomous Tank – Stellaris Microcontroller Implementation with C Programming**

- Designed and constructed an autonomous tank capable of maneuvering through mazes based on serial data reported by distance sensors. Utilized C programming on a Stellaris board in IAR Workbench and Eclipse environments.

**U of Washington UART Design/Build – Hardware Design Language Implementation**

- Constructed a functional Universal Asynchronous Receiver/Transmitter (UART) in Verilog for a microprocessor-based application on the FPGA. Implemented basic I/O processes for a complex system defined in C. Specific framing, timing, and state machines allowed for the asynchronous system to correctly implement I/O functionality.
- Team leader in charge of overseeing group members, finding solutions to errors in output, and completing work on time.

**U of Washington ADC Design/Build – AC to DC Converter and Amplifier**

- Team leader and organizer in construction of an AC to DC converter and amplifier. Design and simulation of schematics were completed using SPICE software. 7.5VAC input was passed through a full-wave rectifier, subduing sinusoidal voltage and allowing a resistive load to output a DC voltage ranging from 10VDC-20VDC depending on potentiometer resistivity, pulse-width modulator frequency, and boost topology.

**U of Washington Program – Signal Modulation**

- Design, coded, and implemented a Morse-code signal modulator in Matlab. This program created and decoded Morse code messages by utilizing the multiplication property of the Fourier Transform.

**The Boeing Company – Quad-Copter Controllable System through Xbox Kinect**

- Worked with a Boeing Defense & Space group to create a system capable of controlling a quad-copter drone through gestures tracked by an Xbox Kinect. Serial communication from the Xbox Kinect is sent to an Arduino Uno which transfers the data through an RF chip to the drone's receiving buffer. Utilized Microsoft Visual Studio 2013 and the Arduino programming environment.

**The Boeing Company – In-Flight Personal Electronic Device (PED) Power Usage**

- Personally designed and executed a power usage experiment designed to monitor the consumption of power for portable computers to obtain data fit to re-evaluate in-seat PED power outlet usage for B787 aircraft.

## Technical Skills

- Programming languages - Java and C Programming, Verilog, MATLAB, HTML, XML, XSLT, VBA
- Hardware Implementation - Arduino Uno, Stellaris, Field-Programmable Gate Array (FPGA), Solder-less breadboard
- Development Environments – Eclipse, NIOS, JGrasp, Arduino, IAR Workbench, VS, LabView, SPICE, MultiSim
- Basic PID based controller development
- Team leader in circuit lab work providing guidance and organization
- Microsoft Office-Microsoft Excel, PowerPoint, and Word

## References - Upon Request