
Electrical Engineering Bachelor of Science with Math Minor

Graduated from Montana Tech of the University of Montana in May of 2018
Passed the FE Exam on April 20th, 2018

Professional Work Experience at Northrop Grumman

Command and Data Handling, Avionics Hardware Design
Tactical Space Systems – 2018 to present

Cognizant Engineer of multiple circuit card assemblies

- Modified/designed a power converter assembly for redundancy and use in both LEO and GEO orbits
- Performed troubleshooting to identify the cause of electrical failures on both flight and non-flight units
- Authored work instructions, test procedures, various electrical analyses, peer review documents, etc.
- Reviewed legacy schematics, board layouts, test fixtures, software, and procedures
- Worked with and without technicians to perform tests, both remotely and personally

Test Engineer for Environmental Testing of fully assembled Flight Units

- Performed Thermal Vacuum, Vibration, and Electromagnetic Interference testing
- Debugged test equipment issues and worked with Ground Software Engineering to fix test software

Other Tasks

- Mentored multiple interns
 - Worked with FPGA engineers to convert a legacy circuit card design to use a new FPGA
 - Used LabView to perform semi-automated tests and debugged software issues when required
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Personal Projects

SwiggiKey: USB keypad designed for rhythm games, made from laser cut and machined stainless steel and acrylic. A study on what it takes to design, test, build, and bring a product to market. See swiggitech.com

Electric Longboard: Dual 190kV motors, custom built 8s4p battery pack and fiberglass case. Had a top speed of 23 mph and a range of about 6 miles.

Computer Case: Designed and built an entirely laser cut acrylic computer case of the smallest possible size.

NUC HTPC: Modified an Intel NUC for completely passive cooling and improved media playback functionality.

Amplifier with EQ: Used an old Techtronics EQ's electronics and chassis to make a 20W stereo audio amplifier.

General Skills and Knowledge

Electronics	EE Software	Other Software	Prototyping	Programming
Schematic Design	Cadence	AutoCAD	3D Printing	C
PCB Layout	LTspice	Autodesk Inventor	Laser Cutting	MATLAB
Part Selection	Multisim	Fusion 360	CNC Routing	Arduino
Microcontrollers	KiCad, EAGLE	Microsoft Office	Woodworking	Some JAVA
I2C, SPI, UART	EasyEDA	LabView	2D Plotting	Some CSS/HTML