

Tristan Luther

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Electrical & Computer Engineering Student

Portfolio: tristanluther.com

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EDUCATION

- **Oregon State University** Corvallis, Oregon
Bachelor of Science - Electrical & Computer Engineering; GPA: 3.9 *September 2017 - June 2022*
Majoring in Electrical and Computer Engineering (ECE), which includes the fundamentals and advanced topics of Electrical Engineering, with an emphasis on embedded systems, architecture, and networking.

EXPERIENCE

- **EEE Components Engineer** In-person
SpaceX, Full-time *September 2021 - Present*
 - Member of the newly formed EEE Components Engineering Team. Involves validating new component requests, communicating reliability/supply concerns with manufacturers and internal supply chain, part validation via hardware in the loop testing. Created and maintained a fully custom product life cycle management software application. Covered all Starlink products.
- **Avionics Intern** In-person
SpaceX, Intern *September 2020 - December 2020*
 - Assisted the Life Cycle Engineering Team, including addressing testing, manufacturing and potential design errors with avionics hardware for Crew Dragon. Assisted with STM32 microcontroller radiation test-bed hardware validation for flight on a Starlink satellite. Assisted with GaN FET reliability testing for Crew Dragon
- **Naval Air Warfare Center Student Trainee (Engineering)** In-person
Naval Air Warfare Center Weapons Division, Intern *June 2018 - August 2018*
 - Operated under Aerospace and Electronics Engineers on the BQM-74E and BQM-34S projects. Responsibilities included writing and proofreading technical documents for engineering changes to the aircrafts and testing avionics systems.
- **Computer Engineering Intern** Remote
FormFactor, Inc., Intern *March 2020 - September 2020*
 - Assisted with RF automation and manufacturing for probe cards and engineering probes used by customers. Automation software was written in C#/VB in the .NET framework and LabVIEW.
- **Electronic Store Manager** In-person
OSU Robotics Club, Manager *January 2018 - Present*
 - Volunteered for 300+ hours in a student run electronics store, called the ResiSTORE, which involved buying and selling components, re-stocking inventory, designing store website, and training new volunteers.
- **DAMLab Technician** In-person/Remote
OSU College of Business, Teaching Assistant *March 2018 - Present*
 - Worked with Business students to get their products to a marketable prototype stage. Involved operation of 3D printers, laser engraver, CNC machine, embroidery machine, sublimation printer, and metal engraver.

SKILLS

- **Languages/Frameworks** Python, PHP, HTML/CSS, C/C++, SQL, Bash, L^AT_EX, LAMP, C#/VB.NET, LabVIEW
- **Software Tools** Eagle CAD, Fusion 360, Jira, Confluence, Git, phpMyAdmin, SQL Server Management Studio, Linux
- **Hardware Tools** Oscilloscope, Frequency Generator, Electronic Load, Multimeter, SMD/SMT Rework, Soldering
- **Credentials** Technician Class Radio Operator; Callsign: KI7YIQ, Part 107 licensed for sub 55lbs. unmanned aircraft

PROJECTS

- **Precision Drip Field Node (Embedded System, CANBus Network)** Designed a CANBus Networked Gardening System on behalf of a company called Precision Drip. Used the MCP2515 CAN-SPI Interface and STM32 F103 series CAN libraries. Tools Used: Atmel Studio, Embedded C, STM32CubeMX, C#.NET, Eagle CAD, Fusion 360. (June '20)
- **Flutter USB HID (Embedded System, USB Device)** Designed HID Device from scratch to get audio data from Windows OS to display on LED display & Seven Segment. Tools Used: Atmel Studio, Embedded C, LUFA, C#.NET, CoreAudioApi, Eagle CAD, Fusion 360. (June '20)
- **MAX 10 FPGA Pollen Board (Custom FPGA Solution, Digital Signal Processing)** Custom FPGA Board based off the Altera MAX 10 FPGA designed for digital signal processing. Performed layout of 484-pin BGA component. See website for more info. Tech: Intel Quartus, SystemVerilog, Eagle CAD, Fusion 360. (March '20)
- **ResiSTORE Website (Web Development, Ecommerce, Inventory Tracking)** Formed database of existing inventory, organized into formal grid system then displayed with a intuitive UX/UI at <https://resi.store>, improved store sales by 300% in single term. Tech: PHP, Javascript, HTML/CSS, SQL (November '18)