Liam Boyle

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EDUCATION

B.S. in Electrical Engineering (GPA: 3.72), *Virginia Tech* – Blacksburg, VA — Graduating 05/2025

- Major: Micro/Nanosystems
- Minor: Computer Science
- Relevant Coursework:
  - Analog IC Design
  - Semiconductor Device Fundamentals
  - VLSI Circuit Design
  - Data Structures and Algorithms

EXPERIENCE

Hardware Engineering Intern, *Parker Hannifin* – Hauppauge, NY — 05/2024 – 08/2024

- Researched and designed an integrate-and-hold capacitance reader with a simulated accuracy of 0.02% for a proposed fuel probe reader upgrade.
- Performed obsolescence reviews on multiple schematics on resistors, transistors, and digital and analog ICs and coordinated with purchasing and different manufacturers to find suitable alternate parts.
- Derived transfer functions and created flow charts that model a commonly used aircraft fuel gauging system and help new engineers understand and analyze key parameters of the overall system.
- Created a part database on Excel using VBA code that can be accessed by multiple report documents and automatically fill in relevant information given the part number.

Electrical Engineering Intern, *WSP USA* – New York, NY — 05/2023 – 08/2023; 12/2023 – 01/2024

- Coordinated with architects and engineers of multiple disciplines to provide solutions to building systems for the Port Authority Bus Terminal, Tiffany & Co., and other clients.
- Developed power, lighting, and fire alarm plans using Revit and AutoCAD and performed load calculations to provide power to different electrical systems while adhering to the NYC and National Electric Code.
- Presented work to the office at the end of the internship and outlined key project achievements and outcomes.

Avionics Member, *Orbital Launch Vehicle Team* – Blacksburg, VA — 09/2022 – 12/2023

- Collected and analyzed flight data to configure multiple flight computers that successfully fired in a 3000 ft launch.
- Gained soldering and hands-on experience from working with and troubleshooting different components.

TECHNICAL SKILLS

Software: LTspice, Cadence, Verilog, C, C++, MATLAB, Revit, AutoCAD, Java, JavaScript, React, HTML, Bluebeam, Microsoft Office

Hardware: Circuit design and testing, reading multimeters and oscilloscopes, embedded systems (MSP432 LaunchPad), FPGAs, PCB design

PROJECT EXPERIENCE (Portfolio: liamboyle4.github.io)

Submarine Communication Component Obsolescence Upgrade, *Virginia Tech* — 08/2024 – 04/2025

- Team of students working to design a PCB that will replace obsolescent ICs for a camera control system on a Framatome SUSI submarine camera. The PCB will include two FPGAs acting as transmitters and receivers and will emulate 8 individual camera functions.
- Coordinating with Framatome, team mentor, and a subject matter expert to meet biweekly milestones.

Home Audio System, *Virginia Tech* — 08/2023 – 12/2023

- Built and integrated a three-band graphic equalizer, class D amplifier, and spectrogram using only basic electrical components, an Arduino, and a real-time FFT algorithm.
- Achieved 87% power efficiency and an undistorted output from the class D amplifier.

AWARDS AND HONORS

All semesters	**Dean's List,** *Virginia Tech*
10/2023 – Present	**IEEE-HKN Honor Society Member,** Virginia Tech