Liam Boyle

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EDUCATION

B.S. in Electrical Engineering (GPA: 3.73), *Virginia Tech* – Blacksburg, VA — Graduating 05/2025

- Major: Micro/Nanosystems
- Minor: Computer Science
- Relevant Coursework:
  - Analog IC Design
  - Principles of Electronics Packaging
  - VLSI Circuit Design
  - Data Structures and Algorithms

EXPERIENCE

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

- Designed a proposed integrate-and-hold capacitance reader with 0.02% simulated accuracy to improve fuel probe efficiency, reduce heavy wiring, and improve fuel economy.
- Evaluated alternate components by collaborating with purchasing and manufacturers and conducting obsolescence reviews on schematics for resistors, transistors, and digital and analog ICs.
- Helped new engineers understand and analyze key parameters of a commonly used aircraft fuel gauging system by deriving transfer functions and creating flowcharts to model the system.
- Streamlined the part list creation process by developing a VBA code-based part database in Excel that automatically populates relevant information based on 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 Virtuoso, Verilog, C, ANSYS EDT, MATLAB, Python, C++, Revit, AutoCAD, Java, Bluebeam, Microsoft Office

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

PROJECT EXPERIENCE (Portfolio: liamboyle4.github.io)

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

- Utilizing modern FPGAs to implement a cost-effective and procurable solution for emulating and replacing obsolete transmitter and receiver ICs in Framatome's SUSI submarine camera system. The FPGAs will be mounted onto custom PCBs to ensure adequate power supply, strong signal integrity, and compatibility with the original chips.
- 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