# Liam E. Timmins

liamtimmins03@gmail.com | 703-309-1534
21982 Auction Barn Drive, Ashburn, VA, 20148

## Education

**University of Virginia, Undergraduate (Unofficial Transcript)** Charlottesville, VA
*Bachelor of Science, Electrical Engineering, GPA 3.69* *Aug 2021 - May 2025 (Expected)*

**Relevant Coursework**

*Math:* Calculus (II-III), Ordinary Differential Equations, Partial Differential Equations, Discrete Math and Theory, Linear Algebra, Probability

*Electrical Engineering:* Electrical Engineering Fundamentals (I - III), Electromagnetic Fields, Digital Logic Design, Introduction to Embedded Computer Systems, Computer Architecture, FPGA Design, Introduction to Control Systems, RF Circuit Design and Wireless Systems, Solid State Devices, Capstone Design

*Computer Science:* Introduction to Programming, Computer System and Organization 1, Digital Signal Processing

**University of Virginia, Graduate** Charlottesville, VA
*Masters of Engineering, Electrical Engineering* *Aug 2025 - May 2026 (Expected)*

## Experience

**Electrical Engineering Intern** June 2024 - August 2024
*Salas O'Brien* *Tysons, VA*

- Designed the electrical system layout for a dozen multi-residential and office layouts using AutoCAD and Revit.
- Calculated critical values, such as branch circuit loads and feeder wire gauge, to ensure compliance with both the National Electric Code and the client's requirements.
- Collaborated with the mechanical and plumbing teams to produce a coordinated final building layout.

**Electrical Subteam Member** Aug 2023 – Present
*Mechatronics and Robotics Society at UVA* *Charlottesville, VA*

- Developing electrical subsystems for an autonomous rover to compete in NASA's Robotic Mining Competition.
- Implementing ferrule connections and testing bus performance to improve the reliability and stability of the robot.
- Collaborating across subteams on PCB design, soldering, and electrical subsystems.

## Projects

**Contributor, Spectrum Analyzer** | *Matlab, Waveforms, Multisim, Ultiboard*

- Designed, validated, tested, assembled, and debugged a multi-component frequency-driven system.
- Implemented a sub-system for scale that was less costly than standard architecture.
- Applied circuit and frequency analysis fundamentals to efficiently troubleshoot a multivariable system.

**Contributor, Electrocardiography** | *Waveforms, Multisim, Ultiboard, Python*

- Designed industry-standard subsystems to meet strict design specifications and produce an observable heartbeat.
- Worked with external PCB manufacturers and part assemblers to meet project timeline.
- Implemented a post-process digital signal process utilizing a moving average filter to reduce noise of the signal.

**Designer, 8-Bit Computer** | *Quartus 2 (VHDL)*

- Used Quartus II software to develop a simple computer through several subsystems.
- Recreated the functionality of several CPU components with the use of block diagrams given a series of specifications and testbenches.
- Designed program in assembly for CPU in order to test functionality of system.

## Achievements and Skills

**Achievements**: Dean's List, AP Scholar with Distinction
**Languages**: Python, C, Assembly, VHDL, Verilog
**Tools**: Excel, NI Multisim and Ultiboard, AutoCAD, Revit, STM32 Development Board, Powershell
**Strengths**: Detail Oriented, Organization, Public Speaking, Creative Writing