

# Liam E. Timmins

703-309-1534 | [liamtimmings03@gmail.com](mailto:liamtimmings03@gmail.com)  
21982 Auction Barn Drive, Ashburn, VA, 20148

## EDUCATION

### University of Virginia, Undergraduate (Unofficial Transcript)

*Bachelor of Science, Electrical Engineering, GPA 3.65*

Charlottesville, VA

*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

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

### University of Virginia, Graduate

*Masters of Engineering, Electrical Engineering*

Charlottesville, VA

*Aug 2025 - May 2026 (Expected)*

### Briar Woods High School

*GPA 4.47*

Ashburn, VA

*Aug 2017 - Jun 2021*

## EXPERIENCE

### Electrical Subteam Member

*Mechatronics and Robotics Society at UVA*

Aug 2023 – Present

*Charlottesville, VA*

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

### Social Chair and Competitor

*Briar Woods Varsity Swim Team*

Nov 2017 - March 2021

*Ashburn, VA*

- Organized and marketed two community wide events to help raise over \$2000 for the varsity swim team.
- Qualified for and swam at Districts and Regionals.

## 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.

### Contributor, Companion Cane | EasyEDA

- Contributed to the design of the electrical subsystems of a device capable of detecting hazardous falls.
- Served as the electrical financial chair, comparing prices and material properties of alternative components.

## ACHIEVEMENTS AND SKILLS

**Achievements:** Dean's List, AP Scholar with Distinction

**Languages:** Python, C, Assembly, VHDL, Verilog

**Tools:** Excel, NI Multisim and Ultiboard, STM32 Development Board, Powershell

**Strengths:** Detail Oriented, Organization, Public Speaking, Creative Writing