Liam E. Timmins

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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)*

Briar Woods High School   Ashburn, VA
GPA 4.47   *Aug 2017 - Jun 2021*

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