

Samuel Wheeler

Chester, Virginia

(804) 510-6155

samwheeler557@gmail.com

www.linkedin.com/in/samuelwheeler3

EDUCATION

B.S. in Mechanical Engineering

Expected Graduation Spring 2028

Virginia Tech, Blacksburg, VA, GPA 3.46

Skills: CAD (Siemens NX, Creo, SolidWorks, Fusion), ANSYS (Fluent, Mechanical), MATLAB, Python, Arduino, Microsoft 365

ENGINEERING EXPERIENCE

Amsted Rail, *Engineering Intern*, Granite City, IL

June 2026 - Present

Support transit rail engineering projects through suspension system design and structural FEA

- Designed a suspension component for transit rail applications, performing dimensioning calculations and CAD modeling in Creo
- Perform static structural, modal, and fatigue FEA on railcar components in ANSYS Mechanical, evaluating load-case compliance and fatigue life using Goodman criteria
- Developed a GUI-based Python application to automate engineering technical report generation by populating report data, integrating material properties, and inserting labeled figures.
- Modify an existing test stand in Creo to accommodate lateral loading of a new bogie configuration

Machworks at Virginia Tech, *Propulsion and Test Stand Subteam Engineer*

January 2026 - Present

Designed and validated a modular support table to accommodate multiple test stands during simultaneous engine tests

- Modeled table frame and mounting layout in Autodesk Fusion 360 to maximize usable area within standard doorway constraints
- Performed deflection and shear flow calculations in MATLAB to ensure integrity before validating in ANSYS Mechanical, achieving a maximum deflection of 0.148 mm.
- Authored table design section of CDR, covering requirements, design rationale, CAD models, structural analysis, and results

Virginia Tech Center for Vehicle Systems and Safety, *Lab Intern*

September 2025 - May 2026

Optimized a freestanding, in-line high-speed imaging system for detection of train undercarriage and wheelset damage

- Designed a clamp mechanism to secure the device, preventing translation and image distortion
- Reconfigured an Arduino-based sensing circuit to detect passing trains and support automated system triggering
- Created a wiring diagram to document sensor connections and system layout

PERSONAL PROJECT

Wraith, *Propulsion and Stealth Lead*

April 2026 - Present

Lead development of a fixed-wing EDF UAV for multipurpose aerospace applications

- Design an EDF inlet in Siemens NX and conduct ANSYS Fluent Design of Experiments studies to evaluate inlet configurations and maximize propulsion efficiency
- Developed a MATLAB radar reflection simulation to compare simplified aircraft panel orientations and identify configurations with reduced radar visibility
- Design a thrust vectoring nozzle with independently actuated petals to control exhaust direction and nozzle exit area for improved maneuverability

EXTRACURRICULAR ACTIVITIES AND AWARDS

Student Engineers' Council at Virginia Tech

Director of Philanthropy

March 2026 - Present

- Oversee year-round funding cycles by leading full process from evaluating applications, allocation meetings, and reimbursement processing of over \$300,000
- Serve as main point of contact for 103 funded engineering organizations, managing communications, addressing funding questions, and maintaining relationships throughout the year
- Support coordination of Virginia Tech Engineering Expo, connecting employers, students, and engineering organizations

First Year Experience Committee Member

April 2025 - March 2026

- Planned social events to introduce First Year Engineering students to their peers and the Virginia Tech community.

Relay for Life at Virginia Tech, *Mission and Luminaria Committee Member*

January 2026 - Present

- Prepared luminarias and ceremony for Relay for Life Big Event and raised \$1,100 for American Cancer Society

Awards

- University of Virginia HooHacks Hackathon, Sustainability Track Winner (2025)
- Modine and Virginia Tech University Hackathon, Overall Competition Winner (2026)