Zachary C. Rohloff

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PROFESSIONAL SUMMARY

Mechanical engineering student at Virginia Tech with hands-on internship experience at NASA Johnson Space Center, specializing in fluid and thermal systems, component design, and precision fabrication. Proven ability to lead small technical teams across the full design-to-fabrication cycle.

EDUCATION

Virginia Polytechnic Institute and State University (Virginia Tech) **Blacksburg, VA**
B.S. Mechanical Engineering Expected May 2028

EXPERIENCE

Engineering Intern **June 2024 - August 2024**
NASA Johnson Space Center *Houston, TX*

- Led a team of interns to design and build a solar charge station for LTV-GTU 01 (lunar rover test prototype)
- Designed the support structure and deployment mechanism for the solar charge station
- Calculated maximum acceptable loads for the solar charge station to prevent tipping
- Machined Wheel Locking Studs for the LTV-GTU and supported SEV transmission refurbishment tasks
- Delivered completed solar charge station on time within the project schedule

Fabrication and Assembly Technician **July 2026 - Present**
Unmanned Systems Laboratory, Virginia Tech *Blacksburg, VA*

- Designed and 3D printed parts for a DARPA (Defense Advanced Research Projects Agency) heavy lift drone during a high-intensity project sprint
- Rebuilt broken frame components and assisted with mounting and remounting of engine components and wiring
- Designing E-CVT system for modifications to adapt DARPA drone for GoAERO design competition

Prep and Maintenance Technician **June 2026 - August 2026**
CMG Leasing *Blacksburg, VA*

- Performed mudding, sanding, and wall prep between tenant occupancies
- Re-caulked fixtures and replaced outlets, blinds, and other household items as needed

River Guide **May 2025 - August 2025**
Summit Bechtel Reserve, Boy Scouts of America *Glen Jean, WV*

- Led groups of approximately 40 scouts through expeditions on the New River Gorge
- Instructed scouts on watercraft operation per Whitewater and Kayaking Merit Badge requirements

Event Services Team Member **August 2022 - January 2025**
Butlers Courtyard *League City, TX*

- Handled equipment set-up and tear-down, table bussing, and buffet service at events
- Performed minor maintenance and bar-backing support as needed

SKILLS

Technical Skills: Component design, Structural load analysis, Precision machining, 3D printing, Data collection and analysis, Technical communication

Software: SolidWorks, Fusion 360, Onshape, MATLAB, Microsoft Office Suite, Google Suite

MATLAB Applications: Aerofoil wind tunnel data analysis, Thermocouple data acquisition and analysis, P, PI, and PID motor controller analysis, Scripted data processing for thermal and mechanical datasets

ACTIVITIES & LEADERSHIP

Outdoor Club at Virginia Tech | Trip Leader, Water Activities Chair **September 2024 - Present**
Boy Scouts of America | Member **2017 - Present**
First Robotics Competition, Chips 324 FRC | Participant **2020 - 2024**

AWARDS & HONORS

- Eagle Scout Award, Boy Scouts of America, 2023