

# CADEN SOLLE

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## EDUCATION

**Sheboygan Area Lutheran High School**

4.0 GPA, 36 ACT, Valedictorian

**Liberty University**

4.0 GPA

Graduating in May 2027 with a B.S. in Mechanical Engineering

## PROFESSIONAL EXPERIENCE

**Lead Payload Engineer, Liberty Rocketry**

May 2025 - Present

- Leading a subteam, delegated tasks, and managed project timelines to ensure successful payload development.
- Designing a technologically relevant payload with applications in artificial intelligence, robotics, and thermal imaging.
- Utilizing CAD modeling and FEA to validate structural stability and optimize payload performance.

**Undergraduate Research Assistant, Liberty University**

Apr 2025 - Present

- Conducting high-strain-rate material testing with a Split-Hopkinson Pressure Bar system, including imaging, electron microscopy, and experimental protocol development.
- Assisting in the design and manufacturing of custom SHPB systems to fit material testing needs.

**Aerodynamics Engineer, Liberty Formula SAE Racing (35<sup>th</sup> of 150 teams in 2025)**

Sep 2023 - Present

- Performing CFD analysis in ANSYS Fluent to enhance aerodynamic efficiency, achieving measurable improvements in drag reduction and downforce generation.
- Modeling, optimizing, and manufacturing numerous carbon fiber parts while balancing both weight and strength.
- Creating complex assemblies using CAD software, ensuring full integration with chassis geometry.
- Designing and developing the first-ever rear wing for Liberty Formula Racing.

**Mechanical Engineering Intern, Trinity Consulting and Design**

May 2025 - Aug 2025

- Utilized Bluebeam and Revit BIM software to create and analyze electronic security system designs, ensuring compliance with BIM standards.
- Conducted site surveys to assess project requirements and inform layout and design decisions.

**Drone Photography Business Owner, New Perspective Aerial**

Jun 2020 - Present

- Founded and operated a drone photography business for a growing client base of 10+.
- Managed customer relationships, created invoices, and handled business documentation.
- Edited and enhanced multimedia content using Adobe Photoshop, Lightroom, and Premiere Pro.

## PROJECTS

**Unmanned Aerial Vehicle (UAV)**

- Engineered a custom UAV with 3D-printed parts to support customizability and quick repairs.
- Created a large-scale, comprehensive assembly to allow modularity.
- Currently refining a payload-deployment system to accurately hit a 10-foot wide target.

**Rocket Motor**

- Designed and developed a solid fuel rocket motor, including grain geometry and nozzle design.
- Tailored the casing for thrust and burn duration targets.

**Racing Drone**

- Engineered and fabricated a high-performance racing drone capable of speeds over 100 mph.
- Configured and programmed the onboard flight controller using Betaflight.

## TECHNICAL SKILLS

- Machines: Lathe, Laser Cutter, Waterjet
- Software: SolidWorks, ANSYS Fluent, Onshape, Revit, Bluebeam, Microsoft Excel, INAV, Adobe Products
- Programming Languages: Python, MATLAB, Java

## CERTIFICATIONS

CSWA Electronic Security Employee Agile Project Management Part 107 UAS License Ham Radio License