CARTER GROEZINGER

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SUMMARY

Mechanical Engineering student at Embry-Riddle Aeronautical University, graduating May 2026. Hands on experience in systems testing, verification, and validation across robotics, autonomous vehicles, and automated manufacturing. Proven teamwork and communication abilities (NCAA athlete). Eager to apply technical skills in an entry level aerospace engineering role.

EDUCATION

Embry-Riddle Aeronautical University — **Daytona Beach, Florida**
Bachelor of Science | **Mechanical Engineering** — Expected Graduation: May 2026
GPA: 3.34/4.00 — Concentration in **Robotics and Autonomous Systems**

WORK EXPERIENCE

Automation Engineering Intern — May 2025 - Present
Cardinal Health — DeLand, Florida

- Support Factory Acceptance Testing (FAT) of automated manufacturing systems by executing test procedures, verifying system performance against requirements, and documenting results.
- Design specialized robotic tooling for high precision pick-and-place operations, improving efficiency and reducing manual labor.
- Develop a custom software package in Java to integrate Universal Robots (UR) robotic arms, enhancing system interoperability and user interface.

Research Assistant — September 2024 - Present
Multiscale Advection Diffusion Analysis Laboratory (MADAL) — Daytona Beach, Florida

- Develop patient generic CFD simulations of renal artery blood flow using Lattice Boltzmann based hemodynamic modeling to support clinical decision making for stent placement.
- Analyze vessel geometry and flow disturbances to evaluate potential surgical maneuvers.
- Scheduled to present final findings at ASME Fluids Engineering Division Summer Meeting 2026.

Engineering Intern — June 2024 - August 2024
Dynamic Engineering Consultants — Lake Como, New Jersey

- Produced detailed site development drawings using AutoCAD for retail, commercial, industrial, and residential projects, ensuring accuracy and compliance with industry standards.
- Led and managed multiple tasks and projects in a fast paced environment, demonstrating strong time management and organizational skills.

SPECIAL PROJECTS

EcoCAR EV Challenge
Team Lead – Connected and Autonomous Vehicle Systems (CAVS) 2025-Present

- Responsible for designing, integrating, and testing both Vehicle-to-Vehicle and Vehicle-to-Infrastructure communication modules.
- Led testing and validation of final AIN (Automated Intersection Navigation) and CACC (Corporative Adaptive Cruise Control) systems using Software-in-loop, Hardware-in-loop, and Vehicle-in-loop methods to validate system performance and fault tolerance prior to competition deployment.

Ramjet Engine Design Project
ERAU X-JEP Club, [Embry-Riddle Aeronautical University], 2023-24

- Contributed as a CFD team member to design a functional ramjet engine in a student led propulsion project.
- Performed aerodynamic simulations using ANSYS to analyze component feasibility and optimize designs prior to manufacturing.

TECHNICAL SKILLS

- **Software Proficiency**: SolidWorks, AutoCAD, ROS2, ANSYS Workbench, CATIA, Linux/Unix
- **Programming Languages**: MATLAB, Java, JavaScript, Python, C++

EXTRACURRICULARS AND AWARDS

- Division II Men's Lacrosse Team
- Presidential Scholarship