

Alaina Bentley

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EDUCATION

Bachelor of Science in Mechanical Engineering

Awarded May 2024

Concentration in Aerospace

GPA: 3.33

Minor: Mathematics

Colorado State University, Fort Collins, CO

Relevant Coursework: Machine Design | Aerospace Vehicles Trajectory & Performance | Fluid Mechanics | Aeronautics | Manufacturing Processes | Space Propulsion & Power Engineering | Heat Transfer

WORK EXPERIENCE

Test Engineering Intern

May 2023-March 2024

Continuous Improvement, Woodward Inc., Fort Collins CO

- Uphold and understand all company policies and procedures. Ensure safety standards are met.
- Automated sump pump procedure for all four TRAS test stands. Created work instructions following ATP's to reduce operator error.
- Rewiring stands, designing quick fixes for stands, assisting in the development of a new test stand.

CSU Ram Racing FSAE Senior Design Aero System Team Member

August 2023-May 2024

Colorado State University Walter Scott Jr. College of Engineering, Fort Collins CO

- Utilized SolidWorks and ANSYS to meticulously design all wing supports for the car, addressing the downforce considerations for both front and rear wings, and ensuring the structural stability.
- Conducted detailed machine design to guarantee secure connections between the designed wing supports and the car chassis.
- Contributed to the overall aerodynamic efficiency and performance of the FSAE car through thoughtful design and analysis, while also collaborating with team members to integrate aerodynamic solutions into the vehicle design.

SKILLS AND INTERESTS

- **Software:** SolidWorks; MATLAB; LabVIEW; VeriStand; TestStand; Google Docs; Arduino; Abaqus; ANSYS; Microsoft; Visual Studio Code; HTML & CSS & JS Languages; STK 12
- **Technical:** Active knowledge of mechanical drawings; GD&T; CNC Machining; Horizontal/Vertical milling operations; Lathe operations; NI hardware and wiring. Propulsion and Orbital Mechanics
- **Soft Skills:** Excellence in customer service, data collection and processing, technical writing, advanced critical thinking, attentive verbal and written communication.
- **Professional Interests:** Design and manufacturing; aerospace engineering; rapid prototyping; software and hardware interference; trajectory and performance for aerospace vehicles

CERTIFICATES

SolidWorks Associate - Mechanical Design
CPR/First Aid Professional Rescuer

CSWA
American Red Cross

December 2021
September 2022

PROJECTS

- **Big Red Battleship:** Utilized Excel to create a spreadsheet to analyze and design a launch vehicle capable of getting to a GTO and GEO orbit. Optimized in STK 12 to find correct Delta V's and details
- **FSAE:** Utilized SolidWorks CAD designing along with real life manufacturing of carbon parts for vehicle