

# Alaina Bentley

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## EDUCATION

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### ***Bachelor of Science in Mechanical Engineering***

Concentration in Aerospace

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

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### **Mechanical Engineering Associate**

*September 2024-Present*

Propulsion, Structures, Ordnance and Controls, FBM Program, Lockheed Martin Space, Denver, CO

- Energetics Aging Hardware Lead Engineer. Analyze conditions and develop solutions to diagnose hardware storage conditions and how it has affected the age and performance of the hardware.
- Manage hardware throughout the Boost Controls subsystem of the D5 missile by understanding and analyzing non-conformances brought upon by suppliers and presenting to the customer.
- Developing technical solutions throughout different phases of the product life cycle, including qualification, production, service support, aging, and analysis.
- Collaborate with the Integrated Product Teams (IPT's) to write SOW's, Proposals, Technical Evaluations, IMS's, and Cost Model Support.

### **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.

## SKILLS AND INTERESTS

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- **Software:** SolidWorks; MATLAB; LabVIEW; VeriStand; TestStand; Arduino; Abaqus; ANSYS; Microsoft Office; Visual Studio Code; HTML, CSS, JS Languages; STK 12; SAP; Creo Parametric
- **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; project management; software and hardware interference; trajectory and performance for aerospace vehicles.

## CERTIFICATES

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SolidWorks Associate - Mechanical Design  
Part 107 Remote Pilot License

CSWA  
FAA

*December 2021*  
*June 2024*

## PROJECTS

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- **Big Red Battleship:** Utilized Excel and STK 12 to design a launch vehicle capable of getting to a GTO and GEO orbit with a pre-determined payload.
- **FSAE:** Utilizing SolidWorks CAD to design along with real life manufacturing of carbon parts for 1/4 scale Formula One vehicles for competition. In charge of the Aerodynamic Kit, where I used Abaqus and ANSYS to choose wings and optimize for performance while balancing interfacing with the suspension kit.