Alaina Bentley

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EDUCATION

Bachelor of Science in Mechanical Engineering *August 2020-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

Mechanical Engineering Asc. *September 2024-Present*
FBM PSOC Controls, Lockheed Martin Space, Englewood CO

- Write and support yearly proposal cycle in the controls group including –Request for Proposals (RFP), Supplier Statements of Work (SSOW), baselining and detail planning Integrated Master Schedules (IMS), Technical Evaluations of Proposals – for both production and requalification program/contracts to be awarded.
- Supporting a team of engineers to manage quality issues, repairs, hardware requalification, documentation updates, design changes, and supplier issues.
- Communicate regularly with the Customer and Suppliers to provide input and status on each program.
- Presenting and authoring Customer deliverables for new Modernization (LE2) contracts including – writing scope, schedule summary, requalification requirements.
- Designed and authored new employee practical onboarding manuals and slide decks. Onboarded six engineering employees and one engineering intern.

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.
- Improvement of operator UI for test stands, debugged code and increased backend flow of the code.

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 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; Creo Parametric; SAP; EPDM Windchill; MATLAB; LabVIEW; Google Docs; Abaqus; ANSYS; Microsoft Office; Visual Studio Code; HTML, CSS, JS, C++; 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; hardware lifecycle

CERTIFICATES

SolidWorks Associate - Mechanical Design	CSWA	*December 2021*
Part 107 Remote Pilot License	FAA	*June 2024*
Additive Manufacturing Associate	LMS	*September 2025*

PROJECTS

- **Big Red Battleship:** Utilized Excel to create a spreadsheet to design and analyze 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