JOSHUA BELTRAME

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EDUCATION

Embry-Riddle Aeronautical University — Daytona Beach, FL
Bachelor of Science – **Aerospace Engineering – Summa Cum Laude** — May 2025
*Area of Concentration – **Aeronautics*** — GPA 3.955/4.0

WORK EXPERIENCE

Quality Engineer – Lockheed Martin — **June 2025 – Present**

- Analyzed nonconformances using RCCA methods to identify sources on the C-130J production line.
- Interface with mechanics and other QE/ME teams to classify problems and evaluate corrective actions.
- Served as the quality point of contact for the C-130J forward fuselage section, leading RCCA and triage efforts.
- Lead FOD reduction effort in the aft fuselage build area employing data analysis and visualization techniques.
- Perform RCCA efforts for different issues saving >40 Scrap, Removal, Repair (SRR) hours per aircraft.
- Served as quality liaison for the Special Programs Office (SPO) during USN and USAF C-130J deliveries.

Flight Test/Systems Engineering Intern – Autonodyne LLC — **May 2024 – August 2024**

- Fabricated fixtures using *Autodesk Fusion 360* to integrate hardware onto flight vehicles.
- Performed flight tests on software and hardware to validate its efficacy and determine any problems.
- Designed software with *Python, TCL/Expect* and *MAVProxy* to interface with *PX4* to pull vehicle flight logs.
- Automated various procedures, including downloading flight logs, new vehicle registration and uploading flight logs to a database, while making the software highly user-centric for quick and easy usage.
- Wrote documentation for the project in its entirety and created a detailed user-guide for installation/usage.
- Instructed and demonstrated to the Flight Test Team on usage of the software and its functionality.

Quality Engineer Intern – Honeybee Robotics — **May 2023 – August 2023**

- Established a baseline of current polymeric mixing processes for analysis of new systems.
- Identified and tested different factors that potentially impacted the hardness of polymeric samples.
- Evaluated how the hardness of polymerics and how they change over time after curing.
- Analyzed data using *Microsoft Excel* and *Python* for visual representation and statistical analysis.

Physics Tutor – Academic Advancement Center — **Aug 2022 – May 2025**

- Validated the accuracy of students in-classwork and redone homework assignments.
- Work through and explain physics questions and concepts to students.

PROJECT EXPERIENCE

B-52 Replacement and Modernization (Personal Project) — **Nov 2025 – Present**

- Perform various mission and design trade studies to investigate optimal design and performance parameters.
- Developed personal software packages with *Python* to aid in the analysis/studies of different conceptual designs.
- Lofted aircraft designs using *CATIA v5* and *OpenVSP* to size the OML and locate various components.

Airplane Detailed Design (Senior Capstone Project) – Design Lead — **Jan 2025 – May 2025**

- Sized the wingbox of a Hybrid-Electric Short Takeoff Landing (STOL) aircraft using the ultimate wing loading.
- Designed the motor mount and analyzed it using *Siemens FEMAP* ensuring minimum deformation and stress.
- Modeled all structural components using *SolidWorks* to analyze different components in *Siemens FEMAP*.
- Presented an overview of the design and analysis at Embry Riddle's annual Industry Advisory Board (IAB).

Airplane Preliminary Design (Senior Capstone Project)– Project Manager — **Aug 2024 – Dec 2024**

- Lead a team of 5 students designing a Hybrid-Electric Short Takeoff Landing (STOL) Military Logistics aircraft.
- Conducted wing sizing and the initial aerodynamic analysis of the aircraft using *XFLR5* and *OpenVSP*.
- Sized and lofted the aircraft in accordance with required payload volume and statistical crew standards.
- Developed the outer mold line (OML) as well as all internal structure and layout of the aircraft in *CATIA v5.*
- Performed the structural analysis to determine the required internal structure sizing to withstand the loading.

AIAA Design, Build, Fly Competition (DBF) –Tails Tech Lead **Sep 2022 – May 2025**

- Designed devices to mount Molex connectors in the aircraft to decrease the assembly time.
- Modeled tail surfaces, structures and control surfaces for the empennage given the outer mold line for the aircraft.
- Integrated tail structures and surfaces with the main aircraft assemblies.
- Oversaw and coordinated sub-team working on specific tail components.

SKILLS

CAD Software: CATIA, SolidWorks, Autodesk Inventor, Autodesk Fusion 360, OnShape
Engineering Software: Multisim, Siemens FEMAP, XFOIL, Git, USAF Digital DATCOM, XFLR5, OpenVSP
Quality Skills: Root Cause Analysis (RCA), Corrective Action (CA), SAP, SFM, RQFS
Programming Languages: Java, Python, MATLAB, Simulink, C++, Bash, Arduino (Familiar With)
Microsoft Office Suite: Word, PowerPoint, Excel, Outlook