Gabe **Carvalho**

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Experience

Spacecraft & Payload Operations and Test Engineer — *Kennedy Space Center, FL*
Amentum - COMET — *January 2024 – Present*

- Lead verification and validation (V&V) operations for Orion recovery support equipment and de-servicing processes.
- Developed procedures for pre-flight processing of ICPS Thermal Control Blankets and Orion Thermal Protection System closeout.
- Managed payload processing operations for CYGNUS, CODEX, and NORS in support of ISS commercial missions.
- Supported hypergolic fueling for Europa Clipper under the Launch Service Provider directive.
- Key Skills: Task Team Leader, Interagency Communication, Mentorship, Problem Solving, & Project Management.

Senior Engineering Intern — *Thomasville, GA*
Pursuit Aerospace — *May 2023 – July 2023*

- Designed test procedures and requirements to certify custom-manufactured endmills for turbomachinery production.
- Programmed 5-axis CNC mills and lathes to support jet engine airfoil part manufacturing (Pratt & Whitney, Rolls Royce, Honeywell).
- Led a team of 7 interns, managing timelines and reporting to executive leadership.
- Key Skills: Kaizen, 5S, Project Management, Leadership, CAD, CAM, GD&T, & Process Planning

Projects

Orion C-17 Transportation — *Testing, Project Management*
Led modification of Orion Recovery Cradle Assembly (ORCA) to meet USAF hazardous transport standards. Developed requirements matrix, designed and directed V&V operations.

Underway Recovery Training 12 — *Interagency Coordination, Leadership*
Participated in Orion crew module recovery training and simulations aboard the USS Somerset. Led post-mission deconfiguration and equipment recovery efforts.

Vee-Tail Static Stability Analysis - Undergraduate Research — *CFD, Vortex Lattice Analysis*
Derived longitudinal, directional, and lateral static stability equations for vee-tail empennage. Validated hand calculations within ±5% through vortex lattice analysis and CFD.

Aircraft Structural Detail Design - Senior Design Project — *FEMAP, MATLAB, Excel VBA*
Led a 6-person team in wing structure design for an unmanned firefighting drone. Conducted airworthiness, loading, and damage tolerance analysis per 14 CFR Part 25.

Education

Embry-Riddle Aeronautical University — *Daytona Beach, FL*
Bachelor of Science in Aerospace Engineering — *Aug 2020 – Dec 2023*
GPA: 3.7

Skills

CAD/CAM Software: Siemens NX (CAD & CAM), CATIA V5 & V6, Fusion360 (CAD, CAM, & CFD), Solidworks
Manufacturing: 3-axis & 5-axis CNC Mills, 3D Printing (FDM & SLA), Sewing, GD&T
Other/Software: Excel VBA, MATLAB, NASTRAN FEMAP, Windchill PLM, Solumina

Certifications and Achievements

June, 2025	**Lean Six Sigma - Green Belt**, Obtained LSS Green Belt.	*The Council for Six Sigma Certification*
May, 2023	**Kaizen**, Trained by Sensei Chihiro Nakao, in Kaizen, 5S, and continuous improvement practices.	*Shingijutsu USA*
Spring/Fall, 2023	**Member of Student & Industry Advisory Board**, Advised Aerospace Engineering department on student concerns, curriculum, and industry trends.	*ERAU*