Mark Thompson

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OBJECTIVE Seeking an internship where I can utilize my expertise in FDM 3D printing to innovate and improve flight vehicle construction.

EDUCATION

Embry-Riddle Aeronautical University Daytona Beach, Florida

Studying Bachelor of Science, Aerospace Engineering May 2026

Area of Concentration: Jet Propulsion Member of Honors Program with 3.2/4.0 GPA

SKILLS

Technical: 3D Printing (FDM) (Ultem 1010, Ultem 9085, PC, PA6-CF15), C++

Engineering Software: Autodesk Inventor and CFD 2023, CATIA V5, Onshape, MATLAB

Office Software: Microsoft Word, Excel, PowerPoint, Planner, SharePoint, OneNote, Teams

WORK EXPERIENCE

ERAU Makerspace (February 2023 – Present) Daytona Beach, Fl

Exotic Materials Lead

- Secured thousands in funding through a research proposal to overhaul two Stratasys FDM 3D printers, allowing them to print exotic materials.
- Implemented a new, large scale filament maintaining solution for less than $200 which can maintain any 3D printing material for months.

Eagle Flight Research Center (EFRC) (November 2022 – August 2023) Daytona Beach, Fl

Research Assistant

- Rapidly mastered an ultrasonic battery pack welder, developing a precise technique that achieved consistent and high-quality bonds within hours; surpassing the months-long efforts of prior research teams.

PROJECTS

Club Project – MATEROV Tethered Submersible:

- Led a team of six to design and construct a tethered submersible from the ground up over two semesters, segmenting the project into manageable sub-projects individuals could complete.
- Developed a modular system for mounting electronics that emphasizes simplicity and accessibility, enabling the team to easily adapt the submersible to diverse operating scenarios and constraints.

Eagle Flight Research Center – Battery Pack Design for Espirit Electric Plane:

- Devised a solution for the rapid prototyping of a large 18650 battery pack through modular and manufacturing friendly design in CATIA V5, allowing the team to properly size the battery pack for its container.
- Refined the cell container design through rapid prototyping to allow for the usage of an automated battery pack bonder, saving hundreds of man hours.

Personal Project – High Temperature FDM 3D Printer:

- Self-taught principles of mechatronics using various online literature sources to continuously improve upon an Ender-3 Pro, resulting in a machine capable of printing any thermoplastic.
- Gained experience in a variety of fields because of the individual nature of the project, such as: fabrication, design for manufacturing, linear motion systems, and insulation design.

LEADERSHIP MATEROV Team Lead, Autonomous Maritime Robotics Association at ERAU

- Lead technical meetings twice a week and coordinate with other students and faculty provide the team with knowledge and equipment that would be beneficial.