Nathan Houck

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U.S. Citizen

EXECUTIVE SUMMARY

Motivated aerospace engineering student with a strong foundation in astronautics and practical experience in thermodynamics and heat transfer. Seeking a Summer 2026 aerospace engineering internship to apply technical expertise and classroom knowledge in spacecraft systems, thermal management, or propulsion design.

EDUCATION

Embry-Riddle Aeronautical University (ERAU) — Daytona Beach, FL
Bachelor of Science, Aerospace Engineering — May 2027
Area of Concentration: Astronautics — GPA: 3.69/4.0
Dean's List, Fall 2023, Spring 2024, Spring 2025
Honor Roll, Fall 2024
Exceptional Eagles Award – ERAU Student Involvement Awards, Spring 2025

PROJECT EXPERIENCE

Autonomous Maritime Robotics Association - Robosub: August 2024-August 2025

Heat Transfer Team Lead

- Researched a solution for electronics cooling within the submarine to reduce internal temperature by over 60°F.
- Investigated heat pipes and thermoelectric cooling.

Mechanical Engineering Team

- Worked with a team of 4 to design, prototype, and manufacture an improved thruster mount.
  - Reduced lateral movement to increase reliability and lifespan.
- Designed and modeled a torpedo launching system that launches the torpedoes when the proper target is identified.
- Prototyped a bin that will release weighted bags over a designated drop zone, utilizing torsion springs and servo motors.
  - Created an IP68 compliant servo housing for a DS3225 servo motor utilizing O-Rings and a dynamic shaft seal.

Undergraduate Researcher – Thermal Science Laboratory (ERAU): August 2025-Present

- Collaborating with the Insituto Technológico de Aeronáutica to create a flow visualization model to study the behavior of phase change materials.
- Created a test section using Autodesk Inventor to contain the PCM and allow it to be oriented at any angle.
  - The test section simulates a constant heat flux boundary condition and a constant temperature boundary condition.

Personal Research – Houck Airfoil Patent US9976421B2 September 2025-Present

- Researching the patented lifting foil design and identifying potential, practical applications for aerospace technologies
- Evaluating the technology readiness level for further independent study with the intent to commercialize the technology

LEADERSHIP/ INVOLVEMENT

Undergraduate Researcher, Thermal Science Laboratory, Fall 2025 – Present
Member, Autonomous Maritime Robotics Association, Fall 2024 – Present
Member, Experimental Jet Engine Propulsion Club, Fall 2025 – Present
Flight Student, Summer 2024 – Present

- Risk management and avoidance
- Effective communication and situational awareness
- Problem solving and remaining calm under pressure
- 28.1 Flight Hours (not current)

Member, National German Honor Society, Fall 2022 - Spring 2023
Volunteer, Event Supervisor, Science Olympiad Regionals, Fall 2019 – Present

SKILLS

Engineering Software:	CATIA v.5, Autodesk Fusion, Autodesk Inventor, MatLab, Python, Java
Office Software:	Microsoft Word, Excel, PowerPoint, Publisher, Teams
Technical:	Drafting, 3-D printing, Computer-Aided Design
Languages:	English (fluent), German (basic)
Hobbies and Interests:	Aviation, Guitar, Alto Saxophone, Scuba Diving, Fossils