

Brandon A. Jacobson

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Education

University of Florida, Gainesville, FL

May 2027

Bachelor of Science in Aerospace Engineering

Minors in Computer Science and Mathematics

GPA: 3.8

Experience

STAR Laboratory Research Assistant

Oct 2024 – Present

Spacecraft Technology and Research Laboratory, Gainesville, FL

- Developing and testing cost functions to optimize engine mode switching for a multi-mode propulsion satellite performing LEO rendezvous maneuvers.
- Tested MATLAB closed-loop control algorithms to evaluate computational performance and solver accuracy for linear engine switching.

Corporate Project Manager

Sep 2025 – Present

Society of Hispanic Professional Engineers, Gainesville, FL

- Maintain and update UF SHPE's Corporate Database, ensuring company information, project highlights, and recruitment data remain current for nationwide members.
- Implement improvements to enhance structure and usability, collaborating with team members to make it a more effective resource for SHPE chapters.

Technical Intern

May 2025 – Aug 2025

F3 International Resources LLC, Miami, FL

- Researched emerging aerospace and defense technologies to evaluate performance specifications and integration feasibility.
- Collaborated with international teams and vendors, providing technical input for system design and component compatibility assessments.
- Organized contract and pricing data into a structured database, improving project planning efficiency and decision-making accuracy.

Controls R&D Team Member

Aug 2023 – Aug 2025

Swamp Launch Rocket Team, Gainesville, FL

- Designed and iterated new mechanical systems using CAD and 3D prototyping to optimize payload functionality and space utilization.
- Constructed simulations to analyze apogee changes caused by air-brake actuation, enabling accurate altitude control within 1% of a 10k ft target.

Projects

Project Icarus

2025 – Present

Quadcopter Drone Project

- Designing and programming a custom PX4-based quadcopter to study flight control, sensor fusion, and autonomous navigation.
- Integrated ESCs, power distribution, and a Pixhawk flight controller for stable flight and telemetry; developing C++/Python MAVSDK scripts for autonomous takeoff, hover, and landing.
- Tuning PID parameters and implementing Kalman filtering to enhance flight stability and altitude estimation.

Portfolio Website

2025 – Present

Personal Website

- Designed and launched a personal portfolio website based on Github Pages using HTML and CSS coding.
- Integrated linked pages to resume, LinkedIn, and GitHub pages for recruiters and other connections.

Skills

Programming: C++, Python, Java, MATLAB, HTML, CSS

Tools: QGroundControl, PX4, MAVSDK, Git, Linux, Arduino

Design: SolidWorks (CSWA), CAD modeling, control system simulation

Technical Focus: Flight software, control algorithms, sensor fusion