Brandon A. Jacobson

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Education

University of Florida Gainesville, FL
Bachelor of Science, Aerospace Engineering May 2027
Minors in Computer Science and Mathematics
GPA: 3.77

Experience

Technical Intern May 2025 – Aug 2025
F3 International Resources, LLC, Miami, FL

- Researched and analyzed specifications of emerging technologies to assess feasibility for defense and aerospace applications.
- Collaborated with international offices and external vendors, providing technical insights to support system integration and management decisions.
- Established a streamlined system for organizing contracts and pricing data, improving efficiency in project planning.

STAR Laboratory Research Assistant Oct 2024 – Present
Spacecraft Technology and Research Laboratory, Gainesville, FL

- Analyzed the efficacy of a linear-switched multi-mode propulsion satellite to achieve a rendezvous in Low Earth Orbit.
- 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.

Controls Research & Development 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 10 kft target.

Projects

Custom Autonomous Quadcopter 2025 – Present
Personal Project

- Building and coding a custom quadcopter from the ground up to explore flight control, sensor fusion, and autonomous navigation using the PX4 flight stack.
- Integrated electronic speed controllers (ESCs), power distribution, and Pixhawk flight controller for stable flight and telemetry data collection.
- Developing Python/C++ scripts with MAVSDK to execute autonomous takeoff, hover, and landing missions with real-time data logging.
- Currently tuning PID parameters and implementing Kalman filtering to improve flight stability and altitude estimation accuracy.

Skills

Design: SolidWorks (Associate Certification)
Programming: Python, C++, Java — MATLAB experience
Languages: Bilingual – Spanish and English