Nathan Eckhoff

+1 (919) 455 8483 | eckhoff.nathan@gmail.com | neckhoff.github.io | github.com/neckhoff | linkedin.com/in/nathaneckhoff

EDUCATION

University of Central Florida, *MS in Aerospace Engineering* | Orlando, FL. USA — Dec 2025
Western Carolina University, *BS Engineering, Concentration: Mechanical* | Cullowhee, NC. USA — May 2023

Relevant Courses: 3D Solid Modeling | Computer Utilization | Statics | Material Science | Mechanics of Materials | Fluid Dynamics | Dynamics | Design of Machine Elements | Thermodynamics | Heat Transfer | Numerical Analysis | Design for Manufacturing | System Dynamics and Control | ODE | PDE

PROFESSIONAL EXPERIENCE

Astrodynamics & Space Robotics Laboratory, *Lab Manager, Project Lead* | Alafaya, FL. USA — Feb 2024 - Present

- Led the current iteration of a robotic platform to emulate spacecraft dynamics in a closed-loop system.
- Designed the enclosure for electrical components for the robotic platform.
- Integrated the 6-DoF Robotic Arm into the 3-DoF Ground Vehicle
- Documented lab and project resources into a central source.
- Orchestrated reorganization and moving of lab spaces.
- Updated the lab's website to include ongoing research, personnel, and lab updates.

Knights Satellite Club, *President, Project Lead* | Alafaya, FL. USA — Aug 2023 - Present

- Pushed the club to explore more complex goals to open opportunities for existing and future club members.
- Oversaw project timelines to ensure team leads were staying within project goals for on-time completion.
- Established Club Standard Operating Procedures for Moored Balloon Flights from UCF's Campus.
- Led a workshop on High Altitude Ballooning and its use as an experimental platform in a near-space environment.
- Documented club operations and projects onto the club wiki.
- Collaborated with other student organizations to increase networking and resource usage for projects with similar goals.

NAVAIR, *Support Equipment Engineer* | Havelock, NC. USA — May 2021 - Aug 2021

- Communicated with Machinists to design Support Equipment for V-22 repair and maintenance.
- Collaborated with team members for project reviews and design development.
- Communicated with specialists to design around manufacturing capabilities.

SKILLS

Languages	Matlab, LaTeX, HTML, CSS
Software	Autodesk Inventor, Fusion360, Creo Parametric, Solid Edge, Solidworks, Microsoft Excel
Soft Skills	Time Management, Problem-solving, Documentation, Leadership, Teamwork, Communication.

ACTIVITIES

High Energy Particle Detector | Project Lead, Undergraduate Research — Aug 2022 - May 2023

- Designed an experiment to detect High Energy Cosmic Ray Particle instances.
- Integrated into Engineering Capstone, Cube Satellite in August 2022.
- Led a team of Electrical and Mechanical Engineers to design a 2U CubeSat Prototype with a redesigned Scintillator Experiment.
- Re-jumpstarted the High Altitude Ballooning Program and Amateur Radio Club at WCU with a return to flight in June 2023.
- Documented all project work for continued work. This project has continued for at least 2 more capstone projects.

FIRST Robotics Competition – *Multiple Roles* — Jan 2016 - Present

- Volunteered Field Assembly, Field Disassembly, and Field Reset across multiple states (Florida, North Carolina, and Texas).
- Mentored a local robotics team while completing my BS Engineering degree.

PROFESSIONAL AFFILIATIONS

American Society of Mechanical Engineers — 2021-2023
American Institute of Aeronautics and Astronautics — 2023-Present
Hispanic Scholarship Fund — 2020-Present

Languages

English	Native proficiency
Spanish	Basic proficiency
German	Intermediate proficiency