Quinten Acchione

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EDUCATION

Embry-Riddle Aeronautical University **Daytona Beach, FL**
Bachelor of Engineering in Aerospace Engineering *Expected December 2026*
GPA: 4.0
Relevant Coursework: Heat Transfer, Aerodynamics, Spacecraft Attitude Dynamics, Structures, Space Mechanics, Aerospace Engineering Materials, Spacecraft Systems, Dynamics, Introduction to Aerospace Flight Vehicles, Solid Mechanics

PROFESSIONAL EXPERIENCE

Phemotron Systems **Daytona Beach, FL**
Lead Drone Developmental Engineer Intern *May 2025 - August 2025*

- Overseeing the design and manufacturing of custom Unmanned Aerial Systems (UAS) tailored for applications in surveillance, mapping, delivery, and other advanced autonomous flight operations.
- Supporting the payload subsystem for the AI-MotherBox-1 CubeSat, specifically focused on the integration and performance of its multispectral optical imager.

Embry-Riddle – Thermal Sciences Lab **Daytona Beach, FL**
Student Representative *September 2025 - Present*

- Investigating the influence of surface roughness on heat transfer and pressure drop in supercritical CO_2 gas coolers using a Python-based numerical model inspired by Dang & Hihara's experimental work.
- Simulating a tube-in-tube counterflow heat exchanger transferring heat between supercritical CO_2 and H_2O to determine performance impacts at varying mass flux, pressure, and relative roughness.

Embry-Riddle – XD Lab **Daytona Beach, FL**
Research Operations and Integration *May 2025 - Present*

- Implementing genetic algorithms and reinforcement learning AI agents in Python for comprehensive global optimization of interplanetary and halo-orbit transfer trajectories

Embry-Riddle – Human Research Program **Daytona Beach, FL**
Lead Researcher *January 2025 - August 2025*

- Designed and contributed to the development of technologies aimed at **reducing medical and environmental risks, optimizing human systems resource requirements** (mass, volume, power, data), and **ensuring effective human-system integration** across exploration mission systems.
- Writing **research proposals** for **NASA-funded grants** and conducting in-depth research to support project goals and advancing understanding of **human health and performance in space environments**.

PROJECT EXPERIENCE

FPV Drone 5-Inch | *BetaFlight* *Personal Project Summer 2024*

- **Soldered electrical components** including the flight controller, speed controllers, and transmitter
- Assembled the frame, motors, and propellers to construct a **fully functional drone**
- Implemented testing and calibration procedures using **BetaFlight** to ensure optimal drone performance

Engineers Without Borders | *Research & Design, SolidWorks* ERAU Club *August 2023 - December 2024*

- Actively involved in a **research and design project** aimed at developing a working water distribution system for the community of El Tunel, Nicaragua
- Utilized **SolidWorks** to design and stress analysis test a water tank and water tank platform

TECHNICAL EXPERIENCE

Software: CATIA, SolidWorks, Autodesk Fusion 360, Microsoft Office Products, Visio, STK, AutoCAD, Nexus, BetaFlight, CFD

Hardware: Vicon

Programming: MATLAB**,** Python, C++, JavaScript

Manufacturing: 3D Printing, Soldering

INTERPERSONAL SKILLS

Leadership, Time Management, Teamwork, Problem-Solving, Emotional Intelligence, Adaptable, Attentive, Resilient, Strong Work Ethic, Project Management, Strong Written and Oral Communication, Presentation Skills