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# COLBY R. DAVIS

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Department of Defense Security Clearance - Secret

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## EDUCATION

University of Central Florida - Online

Fall 2025

Master of Engineering in Aerospace Engineering

Embry-Riddle Aeronautical University – Daytona Beach, FL

Spring 2024

Bachelor of Science in Aerospace Engineering

GPA: 3.3/4.0

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## PROJECTS

Embry-Riddle Aeronautical University Engineering Department

*Guidance, Navigation, and Control (GNC) & Systems Lead* – 12U CubeSat

2023 – 2024

- Created CAD models of propulsion and avionics systems
- Conducted thermal and vibration analyses using ANSYS
- Performed Finite Element Analyses (FEA) for simulated launch g-forces
- Led a team of 5 students through design process adhering to NASA standards compliance

*Lead Mechanical Engineer* – Variable Pitch Propeller

Spring 2024

- Designed propellers tailored for thin Martian atmosphere, focused on maximizing aerodynamic efficiency under extreme conditions
- Conducted stress analysis for flight scenarios in thin atmosphere
- Assembled and integrated propeller system, followed by comprehensive performance and strength testing

*Project Lead* – Satellite Attitude Control System

2023-2024

- Developed Attitude Determination & Control (AD&C) for detumble/orientation using Simulink
- Maneuvered satellite autonomously successfully from point A to B

*CO-Lead* – NASA Micro-G Next Eva Zip-Tie Installer

2023 – 2024

- Actively engaged in hands-on prototyping and performance testing
- Designed parts and GD&T drawings using CATIA
- Drafted mission proposal showcasing design feasibility and operational readiness

## Personal Projects

Pan Tilt Face tracking system

Spring 2024

- Developed human face tracking system using Raspberry-pi and servo motors
- Programmed facial recognition and tracking algorithms in Python
- Designed real-time interface for monitoring and debugging

3D Print Business

2023

- Managed end-to-end production, from CAD-modeling to post-processing, ensuring high quality prints
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## WORK

Anytime Fitness – Jackson, MO

May 2024 - Current

Assistant Manager

- Perform gym operations, including customer acquisition, equipment maintenance, scheduling, to ensure a positive experience for members
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### TECHNICAL

Python, MATLAB, Simulink, NX, Nastran,  
CATIA

### PROTOTYPING & TESTING EQUIPMENT

CNC mills/lathes, laser cutters, 3D printers (FDM,  
SLA, SLS, metal additive).

### PERSONAL

Time Management, Leadership,  
Adaptability, Communication,  
Motivation, Problem Solving, Critical  
Thinking, Willingness to Learn