

# Maddox Gonzalez

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## EDUCATION

### **University of Central Florida**

*Bachelor of Science in Mechanical Engineering*

*Pursuing Masters in Aerospace Thermofluids through BS-MS accelerated program*

*Distinctions:* Dean's List | President's Honor Roll

*Expected Graduation: Fall 2026*

**GPA: 3.573**

## WORK EXPERIENCE

### **UCF Undergraduate Learning Assistant**

*Instructor*

*Jun 2025 – Present*

- Learning in a collaborative math lab environment by guiding students through coursework, clarifying key concepts, and promoting independent thinking for college algebra through Calculus I.

### **Undergraduate Teaching Assistant (Fluid Mechanics)**

*Teacher's Assistant*

*Dec 2025 – Present*

- Support the professor through grading, leading review sessions, and assisting students with fluid mechanics concepts and problem solving.

## TECHNICAL SKILLS & CERTIFICATIONS

SolidWorks Associate | Certified Fusion 360 User | FE Mech. Exam (passed) | C | Python | MatLab | Siemens NX | ANSYS Fluent

## PROJECTS

### **Wind Tunnel**

*Personal Project*

*Jan. 2025 - Present*

- Designing and building a small-scale wind tunnel to study airflow characteristics and measure velocity, drag, and pressure on test models
- Utilizing ANSYS Fluent to simulate flow conditions and compare experimental results against theoretical results

### **Slider-Mesh Transmission**

*Personal Project*

*Sep. 2025 - Nov. 2025*

- Designed and modeled a functional 3D-printed slider-mesh transmission to demonstrate mechanical power transfer.
- Prototyped and iterated gear designs to improve tolerances and functionality using additive manufacturing.

### **IDEAS: Cable Stayed Bridge**

*Sep. 2024 - Dec. 2024*

*Team Project - Lead Engineer*

- Designed and constructed a real model of a modern cable stayed bridge utilizing CAD software and 3D printing
- Conducted tests on load-bearing capacity and stability at various points to evaluate bridge performance

### **Knights Experimental Rocketry (KXR)**

*Aug. 2023 – May. 2025*

*Member of HPR Recovery Team & IREC Aerostructures Team*

- Oversaw the recovery phase of the club rocket with a small team, including apogee separation and parachute deployments
- Analyzed and optimized rocket components, such as: fins, materials, and nose-cone shape to enhance aerodynamic performance and stability

## PROFESSIONAL DEVELOPMENT

### **NASA L'SPACE Mission Concept Academy**

*Aug. 2024 - Dec. 2024*

*Team Project - Lead Engineer*

- Collaborated on a hypothetical team mission task to identify and evaluate lunar lava pits for potential thermal isolation and structural stability as candidates for long-term lunar habitation
- Designed Thermal Management & Power Systems for our spacecraft to ensure mission requirements are met

### **SolidWorks Student Leadership Program**

*Sep. 2025 - Present*

*Job Experience*

- Participating in workshops and collaborative assignments to enhance proficiency in SolidWorks. I am a Certified SolidWorks Associate, and am working towards becoming a Certified SolidWorks Professional.

### **Siemens Xcelerator Academy**

*Dec. 2024 - Dec. 2025*

*Job Experience*

- Developing an understanding of Siemens NX CAD through hands-on coursework and material
- Pursuing a Siemens NX Design Associate Certificate

### **Knights Shadow Program at Kennedy Space Center**

*Aug. 2024*

*Job Experience*

- Selected in University's competitive matched, single-day Shadowing program
- Shadowed numerous Subject Matter Experts and gained understanding of positions, career paths, and skills needed to become successful in the industry