

# JULIO WALL

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## EDUCATION

### University of Central Florida

*Bachelor of Science in Aerospace and Mechanical Engineering*

**Graduation: Dec 2024**

**GPA: 3.39**

### Valencia college

*Associate Degree in Arts*

**Aug 2019 - Jul 2021**

## EXPERIENCE

### Undergraduate Teaching Assistant (ULA)

*Intro to Vibrations and Controls - Dr. Sudeshana Pal*

**August 2024 – Present**

- Conducted weekly office hours and recitation sessions to provide support to students, clarifying complex topics and solving practice problems
- Reviewed assignments and provided constructive feedback to enhance student learning

### Society of Automotive Engineers (SAE) Aero Design

**Aug 2023 – May 2024**

*Senior Design - Technical Design and Manufacturing Lead*

- Presented an innovative micro-class RC airplane design to Lockheed Martin sponsors, representing UCF on an international level at the prestigious 2024 SAE Aero Design Competition
- Applied principles of flight mechanics and aerodynamics to design and manufacture a micro-class RC airplane, managing the development of the wings, fuselage, landing gear, payload, and control surfaces
- Conducted comprehensive trade studies and performance analyses to select an optimal layout, balancing mission performance, schedule, and cost constraints

### Florida Space Institute (FSI)

*Engineer - Project Manager*

**Oct 2022 – Jan 2024**

- Led a four-member team in innovating experimental hardware, simulating dust aggregate collisions in microgravity to mimic the early formation of small icy bodies in the Solar system
- Designed, manufactured, printed, optimized, and sliced 3D models for different lab experiments
- Executing regolith simulation experiments in microgravity on a bi-monthly basis

*3U CubeSat*

**Dec 2022 – Apr 2023**

- Led the design and fabrication of a 3U payload for microgravity asteroid soil research.
- Oversaw payload assembly and collaborated with the rocket team to ensure successful integration
- Conducted testing on a 3U CubeSat, which sustained 90% structural integrity following a 300-foot crash

## EXTRACURRICULAR

### Emergency Insights

*Entrepreneurship*

**Jan 2024 – Present**

- Placed 4th out of 60 companies in the Joust New Venture Competition, securing an award of \$2,000 and highlighting the strong potential of the company
- Conducted extensive research to model detailed reports, develop the business model, and identify market opportunities
- Introduced the company to high-level industry professionals, effectively showcasing our business model and vision

### Propulsion and Energy Research Laboratory (PERL)

*Undergraduate Research*

**Feb 2022 – Aug 2022**

- Followed a procedure for particle imaging velocimetry (PIV) testing to analyze detonation waves
- Collaborated with graduate research students to conduct controlled static firing experiments Rotation Detonation Engines (RDEs)

## SKILLS

**Languages:** English, Spanish

**Design and Modeling Tools:** SolidWorks, Matlab, Ansys, OpenRocket, and Cura

**Programming:** Python, C programming, and LaTeX

**Poster presentations:** Gentle Collisions between Icy Dust Aggregates with Applications to KBO Formation