MATTHEW HERNANDEZ

Orlando, FL 32816
(+1) 954-736-6926 ⋄ ma040619@ucf.edu ⋄ matthewh007.github.io [ePortfolio]

EDUCATION

University of Central Florida August 2021 - May 2026
Bachelor of Science in Aerospace Engineering - Minor in Computer Science and Physics
Cumulative GPA: 3.71/4
Coursework: Engineering Statics, Principles of Electrical Engineering, Thermal and Statistical Physics, Probability and Statistics for Engineers, Mechanics 1, Wave Mechanics 1, Computer Science 1-2, Intro to Discrete Structures, Object Oriented Programming, Cosmology and Galaxies, Solar System Astronomy
Clubs: Society of Hispanic Professional Engineers, Astronomy Club, Knights of Experimental Rocketry
Awards: UCF President's Honor Roll, 2x Dean's List, Black and Gold Grant, Pegasus Sliver Scholarship, Florida Academic Scholars Award

SKILLS

Languages:	Spanish, English, Beginner German
Technical Skills:	CAD Modeling, R&D Experimentation, Technical Writing, Spectrometry Analysis
Software:	Java, Python, C, CSS, HTML, MS Office Suite, MATLAB, Siemens NX CAD
Interpersonal Skills:	Budget Management, Multicultural Awareness, Team Communication, Business Relations

EXPERIENCE

NASA L'SPACE Mission Concept Academy (Online) September - December 2023
Student/Scientist/Outreach Officer

- Computed crucial orbital calculations and conducted instrumentation research.
- Drafted comprehensive Trade Studies on diverse instruments relevant to the mission's objectives.
- Delivered a concise and compelling Preliminary Design Review, before a mock NASA review board.
- Oversaw and allocated a designated budget of $450 million and strategically dividing it into subbudgets.
- Fabricated a comprehensive outreach plan to cultivate interest in our mission and space exploration.

UCF Department of Planetary Sciences Lab (Orlando, FL) May 2023 - Present
Undergraduate Researcher

- Operated a Nicolet iS50 FTIR Spectrometer in visible and near-infrared (VNIR) and mid-infrared (MIR).
- Identified the background and spectra of 40 diverse samples, including lunar and asteroid simulants.
- Systematized reflectance data from samples in Microsoft Excel to calculate albedos.

UCF Mathematics Assistance and Learning Lab (Orlando, FL) August - December 2023
Learning Assistant

- Guided 500 students with classwork in mathematics courses: Pre-Calculus, Trigonometry, College Algebra.
- Facilitated students in conceptualizing mathematical problems, resulting in a 40% improvement in test scores.
- Supervised testing centers to ensure students maintained academic integrity.

PROJECTS

Chaotic motion of a Driven Damped Pendulum March - May 2023

- Designed Python code to simulate the movement of a pendulum with and without a damping constant.
- Generated diverse tables and graphs to illustrate the impact of varying initial variables.

Exploring Basketball Trajectory: Impact of Drag Force February - April 2023

- Simulated the movement of a basketball with quadratic and linear drag force in Python.
- Produced a variety of tables and graphs with various initial values for the simulation.