

Research Statement

BS honors student in Aerospace Engineering and Engineering Physics at Embry-Riddle Aeronautical University, consistently honored on the Dean's List, and a dedicated tutor and research assistant. With research experience in academia and industry, and prior internship experience at Honeywell and NASA, I am eager to pursue a graduate degree with a research focus in biologically inspired robotics, particularly in novel modes of robot locomotion and manipulation.

Education

Embry-Riddle Aeronautical University (ERAU), Daytona Beach, FL Expected May 2025
Bachelor of Science in Aerospace Engineering | Concentration: Astronautics GPA: 3.75/4.00
Bachelor of Science in Engineering Physics | Concentration: Spacecraft Systems Honors Program

- Minors: Applied Mathematics & Computer Aided Design/Manufacturing
- Academic Honors: Dean's List (All terms)

Broward College, Davie, FL Aug. 2018 – June 2020
Associate of Arts with Highest Honors in Engineering GPA: 3.94/4.00

- Academic Honors: President's List (3 terms), Dean's List (1 term) Honors College

Relevant Skills

Design: CATIA V5, Autodesk Inventor, Fusion 360, Femap/Nastran, Blender
Programming: MATLAB, Python, C/C++, Arduino, Microsoft Excel
Technical: 3D Printing, Soldering, Circuit Design, Rapid Prototyping, GD&T
Languages: English (Native), Spanish (Conversational), French (Basic Proficiency)

Professional Experience

ERAU Space and Atmospheric Instrumentation Lab, Daytona Beach, FL Feb. 2023 – Present
Undergraduate Research Assistant to Dr. Aroh Barjatya

- Enhanced the control and monitoring system of a spin table used in rocket boom deployment testing.
- Soldered and constructed multiple payloads for GPS radiosonde balloon satellite launches.
- Tested thermistor configurations for improved data accuracy in high-altitude experiments.
- Assisted with the deployment and monitoring of GPS receivers used to assess the launch impact SpaceX's Falcon Heavy had on ionospheric electromagnetic wave propagation.

NASA John H. Glenn Research Center, Cleveland, OH Aug. 2023 – Dec. 2023
Graphics and Visualization Lab Intern

- Designed detailed models of the X-66A, a Transonic Truss-Based Wing concept vehicle developed between Boeing and NASA under the Advanced Air Transport Technology initiative.
- Developed models and assemblies for ongoing construction efforts to facilitate the replacement of NASA's Electric Aircraft Testbed with an improved test facility.
- Served as the primary liaison for the Glenn Research Center within PAXC, an intern-led organization aimed at fostering communication and collaboration between NASA centers.
- Volunteered at numerous NASA outreach events, where I played a key role in both informing and inspiring the public about cutting-edge research and technology.

Honeywell Aerospace, Clearwater, FL Nov. 2022 – Aug. 2023
Electrical & Systems Engineering Research Assistant & Intern

- Volunteered for a collaborative research program aimed at optimizing the diagnosis and repair processes of malfunctioning inertial navigation systems, addressing a persistent issue at Honeywell's Clearwater facility.
- Proactively scheduled and conducted frequent meetings with site engineers and technicians, providing valuable insights into the intricacies of the manufacturing process and ensuring a seamless alignment between the system's functionality and the manufacturing requirements.
- Presented the model to facility leaders, highlighting a projected annual labor cost reduction of \$250,000 for the eTALIN product line and establishing a framework for extending these savings to other product lines.

ERAU Academic Advancement Center, Daytona Beach, FL Aug. 2022 – Present
Engineering & Engineering Sciences Tutor

- Provide mentorship and guidance to fellow students, actively assisting them in improving their understanding of fundamental engineering disciplines such as Statics, Dynamics, Solid Mechanics, MATLAB, and Aerospace Vehicles.