

Kilian Olen

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Summary

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 undergraduate researcher. Combining research experience from both academia and industry, along with internships at NASA and Honeywell, I am determined on pursuing a graduate degree researching biologically-inspired robotics, with a keen interest in exploring novel modes of robot locomotion and manipulation.

Education

Embry-Riddle Aeronautical University, ERAU

Bachelor of Science in Aerospace Engineering | Concentration: Astronautics

Bachelor of Science in Engineering Physics | Concentration: Spacecraft Systems

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

Anticipated May 2025

Daytona Beach, Florida

GPA: 3.76/4.00

Honors Program

Broward College

Associate of Arts in Engineering

- Academic Honors: President's List (3 terms), Dean's List (1 term)
- Graduation Honors: Highest Honors, Robert "Bob" Elmore Honors College

Aug. 2020

Davie, Florida

GPA: 3.92/4.00

Research Experience

ERAU Office of Undergraduate Research

Undergraduate Researcher

- Successfully secured an internal grant of \$1000 to conduct independent research on the design of a wheeled bipedal robot capable of traversing across discontinuous terrains.
- Currently leading all aspects of the research project, including design, control, data collection, analysis, and interpretation.
- Expected outcomes include a cost-effective, open-source design that will open the door for others to explore a similar topic, and a research paper detailing the methodology, findings, and potential applications of the project.

Feb. 2024 – Present

Daytona Beach, Florida

ERAU Space and Atmospheric Instrumentation Laboratory

Undergraduate Research Assistant to Dr. Aroh Barjatya

- Integrated a Feather M0 microcontroller with a 9DOF IMU to accurately track and monitor a sounding rocket boom spin table.
- Utilized MATLAB and the Arduino IDE to develop a wireless communication system capable of transmitting live IMU readings across LoRa radio modules, improving system efficiency and data accuracy for future experiments.
- Implemented a MATLAB script to parse through individual data packets and export the transmitted data into a formatted Excel table.
- Soldered and constructed multiple payloads for GPS radiosonde balloon satellite launches.
- 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.

Feb. 2023 – Present

Daytona Beach, Florida

Honeywell Aerospace & ERAU Office of Undergraduate Research

Electrical & Systems Engineering Research Assistant

- Volunteered for a collaborative research program aimed at optimizing the diagnosis and repair processes of malfunctioning inertial navigation systems, addressing a pressing issue at Honeywell facilities.
- Organized weekly sessions to identify the prevalent failure modes demonstrated by faulty units and developed effective diagnostic trees to resolve them.

Nov. 2022 – May 2023

Daytona Beach, Florida

Relevant Professional Experience

NASA Glenn Research Center

OSTEM 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.
- 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.

Aug. 2023 – Dec. 2023

Cleveland, Ohio

Honeywell Aerospace	May 2023 – Aug. 2023
Electrical & Systems Engineering Intern	Clearwater, Florida
<ul style="list-style-type: none"> Maintained an integral role in the project by further refining and optimizing the design and implementation of a knowledge-based system. Arranged and conducted vital 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 completed 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	Aug. 2022 – Present
Engineering & Engineering Sciences Tutor	Daytona Beach, Florida
<ul style="list-style-type: none"> Provide mentorship and guidance to fellow students, fostering their understanding of foundational engineering subjects including Statics, Dynamics, Solid Mechanics, MATLAB, and CATIA V5. 	

Skills	
Programming	MATLAB/Simulink, Python, C/C++, Arduino, Microsoft Excel
Design	CATIA V5, SolidWorks, Autodesk Inventor, Femap/Nastran, Blender
Technical	FDM/SLA Printing, Soldering, PCB Design, Rapid Prototyping
Languages	English (Native), Spanish (Conversational), French (Basic Proficiency)

Extracurricular Activities	
NASA Promoting Agency Cross-Center Connections (PAXC)	Aug. 2023 – Dec. 2023
Glenn Research Center Chair	Cleveland, Ohio
<ul style="list-style-type: none"> Served as the primary liaison for the Glenn Research Center within PAXC, an intern-led organization aimed at fostering communication and collaboration across NASA centers to promote a unified organization. Conducted an agency-wide presentation to showcase the achievements and ongoing research initiatives at the Glenn Research Center. 	
NASA Space Apps Challenge	Oct. 2023
VULCAN Team Lead	Cleveland, Ohio
<ul style="list-style-type: none"> Competed in a two-day worldwide NASA hackathon that tasked our team with using open data from NASA and its Space Agency Partners to solve challenges encountered on Earth and in space. Utilized real-time NASA LANDSAT data to identify potential wildfires and categorize their risk level through a machine learning algorithm trained on NOAA satellite data in conjunction with the Fosberg Fire Weather Index. Demonstrated a functional prototype to a panel of NASA judges who awarded our team the first place prize for the Glenn Research Center competition and nominated us as a global nominee. 	
Robot Sumo Competition	May 2020
Team Lead	Davie, Florida
<ul style="list-style-type: none"> Spearheaded the design and development of an autonomous sumo bot, resulting in a highly competitive robot that consistently performed well in both offensive and defensive scenarios. Developed custom Python scripts enabling autonomous movement and defensive behaviors in a dynamic environment. Demonstrated strong leadership and project management skills, where through effective collaboration and communication, our team's design won the competition. 	

Honors & Awards	
Spark Grant Recipient , ERAU Office of Undergraduate Research	Feb. 2024
First Place , NASA Space Apps Challenge (Glenn Research Center)	Oct. 2023
Dean's List , ERAU College of Engineering	Fall 2020 - Present
Bright Futures Academic Scholar , Florida Department of Education	Fall 2020 - Present
Visionary Scholar , American College Foundation	Jun. 2020
President's List , Broward College	Fall 2018, Fall 2019, Spring 2020
Commended Student , National Merit Scholarship Corporation	Nov. 2019
Dean's List , Broward College	Spring 2019

Independent Study	
R. McNeill Alexander, Principles of Animal Locomotion	Nov. 2023 – Present
University of Michigan, Robotics OpenCourseWare	Aug. 2023 – Present
Rice University, Introduction to Biology: Ecology, Evolution, and Biodiversity	Aug. 2023
Northwestern University, Modern Robotics: Mechanics, Planning, and Control	Aug. 2023