

Kilian O. Olen

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Research Statement

BS honors student in Aerospace Engineering and Engineering Physics at Embry-Riddle Aeronautical University, consistently recognized on the Dean's List, and actively engaged as an engineering tutor and research assistant. Combining research experience from both academia and industry, along with internships at Honeywell and NASA, I am determined on pursuing a graduate degree researching biologically-inspired robotics, with a keen interest in innovative 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)

Daytona Beach, FL
Anticipated May 2025
GPA: 3.72/4.00
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

Davie, FL
Aug. 2020
GPA: 3.87/4.00
Honors College

Research Experience

ERAU Space and Atmospheric Instrumentation Laboratory

Feb. 2023 – Present

Undergraduate Research Assistant to Dr. Aroh Barjatya

- Soldered and constructed multiple payloads for GPS radiosonde balloon satellite launches.
- Tested various thermistor configurations for improved data accuracy in high-altitude experiments.
- Enhanced the control and monitoring system of a spin table used in rocket boom deployment testing.
- 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.

Honeywell Aerospace & ERAU Office of Undergraduate Research

Nov. 2022 – May 2023

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 persistent issue at Honeywell's facility.

Relevant Professional Experience

NASA John H. Glenn Research Center

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

May 2023 – Aug. 2023

Electrical & Systems Engineering Intern

- Expanded involvement in research program by transitioning to a summer internship at the Clearwater facility.
- Maintained an integral role in the project by further refining and optimizing the design and implementation of the knowledge-based system.
- 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 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

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

Selected Honors & Awards

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| • Dean's List, Embry-Riddle Aeronautical University | Fall 2020 – Present |
| • Diamond Eagle Scholarship, Embry-Riddle Aeronautical University | Fall 2020 – Present |
| • Bright Futures Academic Scholarship, Florida Department of Education | Fall 2020 – Present |
| • First Place, NASA Space Apps Challenge (Glenn Research Center) | Fall 2023 |
| • Visionary Scholarship, American College Foundation | Summer 2020 |
| • President's List, Broward College | Fall 2018, Fall 2019, Spring 2020 |
| • Commended Student, National Merit Scholarship Corporation | Fall 2019 |
| • Dean's List, Broward College | Spring 2019 |

Skills

- Programming & Analysis: MATLAB/Simulink, Python, C/C++, Arduino, Microsoft Excel
- Design & Simulation: 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

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| • Advanced Humanoid Robotics Laboratory | Spring 2024 – Present |
| • White Hat Eagles Cybersecurity Club | Fall 2021 – Spring 2022 |
| • Robotics Association NASA Lunabotics Challenge | Fall 2020 – Spring 2021 |
| • Game Development Club | Fall 2020 – Present |

Independent Study

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| • 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 |

References Available Upon Request