Julianne Owen

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Education

University of Florida Herbert Wertheim College of Engineering — Gainesville, FL
Major: Aerospace Engineering — *Graduating Fall 2024*
GPA: 3.77
Certificate in Responsible Conduct of Research — *Completed in December 2020*

Employment

NASA Pathways Intern – Johnson Space Center — Houston, TX

CI2 – CRONUS, Flight Operations Directorate — *May 2022 – August 2022*

Keyboard Camera Command (KCC) Tool Upgrades (ISS Software)

Worked on software upgrades for CRONUS console tools

- Increased the fluidity of the movements of external ISS cameras
- Improved the UI design of the KCC tool

EG5 – Flight Mechanics and Trajectory Design Branch, Engineering Directorate — *August 2021 – December 2021*

Mars Ascent Trajectories for Artemis X+ (in Genesis)

Wrote single and multi-stage trajectory scripts for Mars ascents to conduct analysis on future Artemis trajectories

- Simulated Guidance, Navigation, and Control (GNC), the Martian environment, and attitude constraints
- Optimized ISP, target altitudes, propellant mass, ascending nodes, and Periareion/Apoareion distances
- Analyzed and compared the different launches and presented to branch chiefs and program leads

LEO Orion Aborts for Artemis II (in Copernicus)

Created Low Earth Orbit (LEO) abort trajectories for Artemis II to safely bring the crew back to Earth

- Edited scripts, ran scans, and compiled data to create optimized abort trajectories for every minute of a launch window with a focus on flight path angle data

Leadership

Johnson Space Center

JSC Intern Committees 2022 — *May 2022-August 2022*

Flight Director Chair, Tours and Lectures Committee

- Contacted, organized, and hosted lectures in Mission Control with past and future Flight Directors and senior staff members Gene Kranz, Ginger Kerrick, and Chris Dobbins, and Ronak Dave

JSC Intern Committees 2021 — *August 2021-December 2021*

Flight Director Chair, Tours and Lectures Committee

- Contacted, organized, and hosted lectures in Mission Control with Flight Directors such as Gene Kranz, Ginger Kerrick, and Fiona Turett

Outreach Project Lead, Outreach Committee

- Organized and planned community outreach events for the interns to participate in while in Houston

Recovery Subteam Member, Rocketry Committee

- Researched recovery technologies, assisted in organizing L1 certification launches for committee members

University of Florida

Freshman Leadership Engineering Group — *September 2020-April 2021*

Member, Professional Networking and Development Committee

- Planned events for engineering students focused on cultivating leadership skills

University of Florida's Rocket Design Team — *August 2020-April 2021*

Member, NASA SL Testing Subteam

- Conducted research on testing methods, wrote procedures, and assisted with the team's CDR for NASA
- Designed and tested high-power model rockets

Honors, Distinctions, and Certifications

- John & Mittie Collins Engineering Scholarship — *Awarded in August 2022*
- PERL Level 1 Certification — *Certified in June 2022*
- Systems Toolkit (STK) Level 1 Certification — *Certified in April 2022*
- NASA JSC Pathways Intern Certificate Award — *Awarded in December 2021*
  - given to ~5% of NASA Fall 2021 Pathways interns for outstanding performance
- SolidWorks Associate's Certification — *Certified in March 2021*
- Florida Top Scholar — *Awarded in January 2021*
- President's Honor Roll — *Awarded in January 2021*
- Benaquisto Scholar — *Awarded in May 2020*
- National Merit Scholar — *Awarded in May 2020*
- Undergraduate Research Scholars Program — *Awarded in February 2020*
- University of Florida Honors Program — *Awarded in February 2020*

Research

"Underwater Sensor Fusion" — *August 2022-Present*

- Developing sensor fusion techniques that combine information from sonar and camera images using path-planning algorithms that maximize outputs while minimizing necessary inputs

"GatorSense – An efficiency Oriented Approach to Remote Lunar Volatile sensing using Integrated IR spectroscopy and MOS (Metal Oxide Semiconductor) System" — *November 2021-Present*

- Conducted research, design, and development for a sensor that will be used to detect volatiles emitted when lunar regolith is superheated during NASA's MMPACT Project
- Deliverables: ASM Submission and sensor prototype; patent in progress

"Integrating Innovation into the Engineering Student Experience" — *January 2021-April 2021*

- Worked with Dr. Melissa Mae White to improve the innovation culture across UF's College of Engineering

Languages	Software
MATLAB, Julia, PERL, and Python	SolidWorks, Copernicus, Genesis, STK, and OpenRocket