

# James “Wyatt” Cross

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## EDUCATION

### University of Florida, Gainesville, FL

**Expected Graduation – May 2026**

Bachelor of Science, Aerospace Engineering

**GPA: 3.65**

- University of Florida Honors College
- University Research Scholars Program

### Relevant Coursework:

- Autonomous Vehicles
- Design and Manufacturing Laboratory
- Computer Aided Graphics and Design
- MATLAB Programming
- Professional Communication for Engineers

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## EXPERIENCES

### Undergraduate Researcher

**Sep. 2022 – Present**

UF Nonlinear Controls and Robotics Group

- Implements Lyapunov-based nonlinear herding algorithms utilizing deep neural networks while supporting PhD candidates in their research and demonstrations
- Validates algorithms by writing Python simulations and ROS 2 packages in Linux to control land robots and drones both real-time and autonomously
- Supports the Air Force Office of Scientific Research: Center of Excellence in Assured Autonomy in Contested Environments by configuring rovers for stakeholder demos
- Wrote ROS 2 packages to share and compare vehicle position between 8+ robots, allowing agents to be “neutralized” when the distance between them is below a threshold
- Built and deployed a remote emergency stop system using C++ and Arduino to 30+ robots
- Designed and fabricated parts to increase robot ground clearance by 50%

### UF AIAA Region II Student Conference Director

**Apr. 2023 – Present**

- Communicated with professionals from industry, government, and academia to coordinate the upcoming 2024 AIAA Region II Student Conference
- Presented to 30+ students on the process and benefits of pursuing independent research

### Research and Creativity Course Teaching Assistant at UF

**Jul. 2023 – Aug. 2023**

- Presented various topics including reading a peer reviewed journal article, library resources, research design, creativity, and research opportunities to 60+ freshmen

### University Research Scholars Program Peer Mentor

**Jul. 2023 – Present**

- Mentoring two incoming freshmen on finding research, academic resources, and class selection

### Portfolio Website: [link.wcross.dev](https://link.wcross.dev)

**2021**

- Designed and coded a personal website to organize and share my projects and research

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## PAPERS & PRESENTATIONS

*Review of Autonomous Technologies for a Crewed Exploration of the Lunar South*

**March 28, 2023**

*Pole, J. Cross*, AIAA 74th Annual Southeastern Regional Student Conference, Knoxville, TN

Placed 2<sup>nd</sup> in the Open Topic Category

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## HONORS

- Mechanical and Aerospace Outstanding Leadership Award Scholarship - **Spring 2023**
- Herbert Wertheim College of Engineering Dean’s List - **Fall 2022, and Spring 2023**
- UF Admissions Honors Scholarship
- UF Undergraduate Research Scholar
- Florida Academic Scholars Award

## SKILLS

- Certified SOLIDWORKS Associate (CSWA): Certification ID: C-EMFYRHZ7XT
- Microsoft Word, PowerPoint, Excel, Visio
- Python, MATLAB, and Arduino
- Ubuntu Linux
- Robot Operating System 2 (ROS 2)