Logan Shaffer

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EDUCATION

Embry-Riddle Aeronautical University Daytona Beach, FL
B.S. in **Engineering Physics**, Spacecraft Instrumentation Track May 2026

WORK EXPERIENCE

Embry-Riddle Aeronautical University Daytona Beach, FL
Extended Reality (XR) Developer May 2025 – Present

- Developed the "Immersive Flight Dynamics" XR program in Unity for Quest 3 and YAW Motion Simulator
- Implemented UDP server communication between the application and an external Python script that runs JSBSim flight dynamics model, integrated live ATSB data, and JavaScript for reading and writing files
- Integrated user experience (UX) feedback from flight professors to improve immersion in the simulation and strengthened backend safety protocols for emergency scenarios

NSF REU Intern - *"A Versatile Synthesis of Self-Healing Polymers"* May 2024 – Jul 2024

- Conducted characterization of self-healing PDMS polymers via tensile testing and increased performance by 30% through introducing alcohol during the repair process
- Built Python scripts to automate the analysis of force and distance data to save over 10 hours weekly and improve accuracy in iterative stress and strain calculations

Supplemental Instruction Leader, Teaching Assistant Sept 2023 – Sept 2025

- Instructed groups of up to 40 students in introductory physics and boosted student pass rate by 9%

UNIVERSITY PROJECTS

mDLP, Senior Design Aug 2025 – Present

- Designed and developed a GUI for a plasma chamber using Python and Julia with MVC architecture capable of displaying real time readings and recording to a file and playback asynchronously
- Enhanced microcontroller C++ code to measure electron density, electron temperature, and plasma potential from dual sweeping Langmuir probes and plot the parameters on an I-V curve

Ball Balancing Platform, Junior Design Jan 2025 – Apr 2025

- Collaborated with a group of three students to build a platform capable of self-balancing a steel ball
- Used C++ to program the inverse kinematics and PID algorithms using an Arduino to move the platform

UNIVERSITY ACTIVITIES

Tau Beta Pi Engineering Honor Society, Corresponding and Recording Secretary Nov 2024 – Present

- Performed various administrative tasks such as managing membership information and facilitating communication between officers and the chapter

Omicron Delta Kappa National Honor Society, Vice President Apr 2024 – Present

- Organized monthly meetings to coordinate operations of the society; planned leadership events in conjunction with other university societies and organizations

Student Union Advisory Board, Point of Contact / Officer Nov 2022 – Present

- Represented the 7000+ student body in decision-making processes to improve the Student Union by gathering feedback through tabling events and conducting surveys to enhance student experience
- Led a proposal to acquire $10,000 to host the annual Super Bowl party event, resulting in a 60% increase in student engagement for the event

TECHNICAL SKILLS

Coding Languages: C#, C, C++, Python, JavaScript, HTML, CSS, Julia

Software: Unity, Git, Blender, CATIA, PuTTY, OpenXR SDK