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Andy Henriquez

Technical Skills

Languages	C, C#, C++, Python, Java, HTML, JavaScript, CSS
Tools	Unity, Unreal Engine 5, Blender, Git, LaTeX, React, Vite Tailwind, Node, Vuforia, OpenCV, Omniverse, PhysX
Platforms	Windows, Linux, Android, Meta, Vive, HoloLens, XREAL, CAVE

Professional Experience

March 2024-Present

Graduate Research Assistant, *Virtual and Augmented Reality Lab, UCF*, Orlando, FL

- Designed an augmented reality safety training program to be used in the UCF cleanroom as well as used object detection and contextualized information to efficiently assist training on the sophisticated machines within the cleanroom.
- Developed and led a Lockheed Martin sponsored project on creating an eye tracking SDK to assist their own XR development team. One of the tools included in the SDK was a shader that created a 3D mesh heatmap to visualize how long a user's eye gaze was on any meshes within the scene.
- Worked and learned alongside numerous industry professionals to design and implement innovative and interactive software solutions in virtual reality and human–computer interaction.

Projects

"House of Nevermore" Dark Ride

Designed blue-sky concept project pitch for Universal Creative, in UCF's Universal Creative Lab taking into account the story, guest safety, budget and contingencies, ride construction schedule and more. Ride visualization done using Unity with custom editor tools to simulate the ride vehicle along a spline path. Designed 3D show scenes based on Edgar Allan Poe's "The Raven" using Blender for project-specific assets like the ride vehicle.

VR Snowboard Simulator

Engineered a snowboarding simulator for the Meta Quest 2 in which users control a virtual snowboard through a custom-built physical board tracked by VIVE Base Stations. Engineered the board using CNC machining, welding, rails, and springs, and integrated a VIVE tracker to transmit positional and rotational data to the computer in real time.

NASA SEE

Led a development team in building two distributed simulations using the HLA standard with NVIDIA Omniverse and PhysX for NASA's Simulation Exploration Experience. Simulated transport of materials into a lunar crater and extracting ice from the floor of the crater to the surface.

Education

January 2025 – Present

Master of Science, Computer Science, *University of Central Florida*, Orlando, FL
Research Focus: Virtual/Augmented Reality, Human-Computer Interaction

May 2024

Bachelor of Science, Computer Science, *University of Central Florida*, Orlando, FL
Magna Cum Laude, GPA: 3.90