Valentina Herrera Molano

Orlando, FL (Willing To Relocate)
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Personal Summary

Simulation Engineering professional with expertise in SolidWorks and digital fabrication. Skilled in rapid prototyping and programming, with a track of driving innovative solutions such as the Full Sail Tech Building Mixed Reality Tour. Committed to fostering collaboration and creativity in team environments.

Skills

- CAD design expertise
- Embedded systems programming
- C++, C# and python programming
- Unreal and Unity development
- 3D printing and laser cutting
- CNC machining
- PCB design and fabrication
- Project management using Trello
- Version control with GitHub
- Soldering
- Microsoft Office Suite

Experience

Simulation Engineering Extern
December 2025 to Current
Full Sail University – Winter Park, FL

- Assisted staff and students with technical challenges, fostering a supportive learning environment.
- Configured and maintained digital fabrication equipment, ensuring optimal functionality and availability.
- Evaluated new workflows for efficiency improvements in the Simulation Engineering program.

Student Tour Guide
February 2025 to August 2025
Full Sail University – Winter Park, FL

- Served as student ambassador on Full Sail University's Behind the Scenes Tour.
- Guided big crowds through the school's facilities on a predetermined route.
- Assisted with set-up and closing procedures on the day of each event.
- Provided customer service while interacting with potential new students and visiting guests.

Education

Bachelor of Science : Simulation & Visualization, September 2025
Full Sail University – Winter Park, FL, USA

- Salutatorian and Women in Technology Scholarship Recipient
- Completed coursework in digital fabrication, simulation software and virtual reality, applying these skills to practical projects.

Projects

Smart Pill Dispenser, 06/25 - 07/25 Fabricated a human-centered assistive technology product to help make the user's life easier. Designed the mechanical system in SolidWorks and performed motion studies to validate mechanism accuracy. Designed, fabricated, and soldered a custom printed circuit board to integrate the electronic system into the device. Programmed the microcontroller to control the electronic system of the device. Built and programmed a user interface with an LED display and buttons for pill placement and alarm setup, allowing users to control the dispenser and motor functions.

Full Sail University Tech Building Mixed Reality Tour, 05/25 - 06/25 Developed a Mixed Reality experience for the Meta Quest 3 to showcase real and virtual classroom environments. Conducted research to configure passthrough material behavior, enabling accurate display of real classroom elements before transitioning to a virtual environment. Engineered a passthrough to full virtual transition by creating a dynamic material and implementing a timed material-change function in Unreal Blueprint for smooth visual blending. Expanded the application to support multiple classrooms by implementing a singleton in C++ to reposition blueprint instances based on positional anchors and dynamically update environment placeholders.

Six Degrees of Freedom Platform Simulation, 12/24 - 02/25 Led the project through all stages, including mechanical design, fabrication, electronics, and software integration. Designed the platform in SolidWorks following specifications, and fabricated components using 3D printing and laser cutting machines. Designed, fabricated, and soldered a custom printed circuit board. Configured serial communication between the microcontroller and a Unity application to stream real-time motion data. Developed a Unity simulation of a robot flying over traffic synchronized to the platform's movements. Enabled user control of the robot to avoid collisions and win the game, creating a gamified simulation experience. Delivered a functional motion feedback system capable of enhancing immersive entertainment experiences.

Certifications

Certified SOLIDWORKS CAD Design Professional