

Ryan Curphey

Simulation Engineer

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About Me

Simulation Development Engineer with expertise in **software and hardware integration**, specializing in **VR/AR applications, military training simulations, and embedded systems**. Skilled in **C++, C#, and Python**, with hands-on experience in **Unity and Unreal Engine 5**.

Skilled in **hardware troubleshooting, microcontroller programming, and PCB design**. Adept in **Docker for code sharing, Microsoft Office for technical documentation, and simulation interoperability (DIS)**.

Graduated **Valedictorian** with a **BAS in Simulation & Visualization Technology** from **Full Sail University**, demonstrating a commitment to excellence and innovation in simulation development. Backed by a **letter of recommendation** for outstanding contributions in the field.

Internships

Systems Repair, Jan 2024 - May 2024

TechBayUSA

30 day internship

Education

BSC, SIM TECHNOLOGY , Aug 2022 - Feb 2025

Full Sail University, Winter Park, FL

- **Valedictorian** of the graduating class.
- **Programming Expertise:** Strong foundation in **Python, C#, and C++**, with hands-on experience in **Unity and Unreal Engine 5** for **VR/AR development**.
- **Systems Programming:** Developed a deep understanding of **low-level programming concepts**, including **memory management, embedded systems, and real-time applications**.
- **PCB Design & Embedded Systems:** Designed, programmed, and integrated **printed circuit boards (PCBs)** into **simulation and microcontroller-based projects**.
- **3D Modeling & Design:** Proficient in **SOLIDWORKS**, actively working toward certification to enhance **mechanical design and simulation skills**.
- **Project-Based Learning:** Completed **various real-world simulation projects**, including **DIS (Distributed Interactive Simulation), military training systems, and AR/VR applications**.

Employment history

Junior Simulation/modeling engineer, Aug 2024 - Present

SAIC, 12809 Science drive, Orlando FL 32826

- Using Distributed Interactive Simulation (DIS) & simulation interoperability a standard protocol for interoperability between simulations.
- Designed and built a user-friendly GUI with menu-based navigation for launching simulation tools and managing mission scenarios.
- Software Development & System Integration using MS flight sim 2024.
- Security clearance
- **simulation development using Unreal Engine 5 and C++.**
- Integrated batch file execution for seamless launching of third-party applications

Skills

Python (*Experienced*),
C++ (*Skillful*),
Simulation Enginerring (*Experienced*),
Unreal engine 5 (*Skillful*).

References

Available upon request. .

Links

My Website:

ryancurphey.com.

Computer Specialist, Jan 2024 - Dec 2024

TechBayUSA, 3590 N US 17, Lake Mary, FL 32746

- Diagnosed and repaired **150+** laptops, desktops, and microcontrollers, restoring full functionality.
- Managed **Windows and Linux system imaging**, reducing device setup times by **40%**.
- Implemented **preventive maintenance** plans, reducing client repair frequency by **25%**.
- Assisted in **network troubleshooting**, resolving **Wi-Fi and Ethernet connectivity** issues for small businesses and schools.
- Provided **remote troubleshooting** using tools like TeamViewer and command-line diagnostics.

Systems engineer, Jul 2024 - Sep 2024

L2R Consulting, Multiple locations

- Streamlined IT operations in educational institutions, enhancing system efficiency. Orchestrated swift resolution of major software glitch affecting numerous devices.
- created automated **Python scripts** to streamline testing and debugging processes.

Projects

Project and portfolios, Notable projects

- **Networking Flight Simulator** (*Unreal Engine 5*) – Developed a **networked flight simulation** that **lands the Space Shuttle Atlantis** at the **Titusville Space Landing Strip**, integrating **realistic aerodynamics and networking features** for a synchronized multiplayer experience.
- **Military Training Simulation** – Contributed to a **military-grade simulation project**, integrating **real-time physics and training scenarios** for enhanced immersive experiences.
- **Retro First-Person Shooter** (*C++*) – Created a **fully functional console-based FPS game** with **raycasting-based rendering, weapon mechanics, and basic AI** for enemy encounters.
- **Stewart Platform (6DOF) Simulation** (*C++*) – Designed and simulated a **highly responsive 6-degree-of-freedom motion platform**, focusing on **multi-axis coordination in real-time systems**.
- **Boop It (Unity Game)** – Developed an **interactive physics-based game** using **advanced game physics and state management** to enhance player engagement.
- **Navigator (Unity Game)** – Created a **simulation-driven pathfinding system**, implementing **AI-based navigation algorithms** to mimic **real-world travel scenarios**.
- Portfolio website using React <https://ryancurphey.com>

GitHub Portfolio

<https://github.com/diamondcougar10>

LinkedIn

<https://www.linkedin.com/in/ryan-curphey-729a98268>

Hobbies

- **Computer Engineering & Hardware** – Passionate about **building, repairing, and optimizing computers**, from desktops to high-performance workstations.
- **Programming & Software Development** – Enjoy developing applications in **C++, Python, and C#**, with a focus on **game development, simulations, and system programming**.
- **3D Printing & CAD Design** – Creating and prototyping **custom 3D models** for **engineering, simulation, and personal projects**.
- **Linux Systems & Cybersecurity** – Enthusiast in **Linux distributions (Ubuntu, Kali, TAILS)** with experience in **system administration, penetration testing, and networking**.
- **Technology Restoration & Upcycling** – Refurbishing and restoring **laptops, desktops, and microcontrollers**, ensuring peak performance and resale value.