

# SURYA SRINIVASAN

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## EDUCATION

**Worcester Polytechnic Institute (WPI), Worcester, MA**

Aug 2022 – May 2024

**Master of Science in Interactive Media and Game Development, GPA 4.0**

- Courses - Design Studio, Computer Graphics, Technical Game Development, Embodied Interactions

**Vellore Institute of Technology (VIT), Chennai, India**

Jul 2018 – Apr 2022

**Bachelor of Technology in Computer Science and Engineering, GPA 8.16**

- Courses – Game Programming, OOP, Computer Architecture, High Performance Computing, Operating Systems

## SKILLS

**Programming Languages:** C++, C, Java, JavaScript, Python, C#, PHP, SQL, HTML, CSS, GLSL

**Applications:** Unreal Engine, Unity, Godot, Blender, Node-Red, Tableau, Visual Studio, Microsoft Office

## EXPERIENCE

**VR/AR/AI Intern | UMass Chan Medical School | Worcester, MA**

Jun 2024 - Present

- Developed a Unity VR app featuring **generative AI** characters via the Convai framework, integrating patient backstories and narrative-driven interactions. This work was funded by the Macy Grant.
- Implemented a custom Unity UI system to send in-app survey data to Qualtrics API for user feedback collection.
- Built complete gameplay flow supporting solo and group play modes.
- Designed the app to support scalability for additional patient scenarios and AI agents in future iterations.
- Conducted **pilot tests** with user feedback, identifying areas for improvement and refining functionality to better suit medical learners.
- Explored healthcare use cases by prototyping a **multi-agent framework** using Microsoft's Autogen Framework.
- Helping to create a unity package that allows easy access to Azure AI Foundry Services inside Unity Engine.

**Level Designer and Developer | Caution Ready Games | NC,USA (Remote)**

Jun 2023 – Apr 2024

- Assisted in the development of a **vertical slice level** for a Third Person IP called Frontier Planets Origin
- Diagnosed and resolved gameplay bugs to enhance player's Quality of Experience.
- Integrated a Weapon wheel with the Inventory system to allow faster transition between items.

## PROJECTS

**Dragonfly Game Engine – C++, SFML**

- Engineered a text-based game engine that manages 2D ASCII-based graphics with basic kinematics and box collision.
- Designed an **Observer pattern-based Event-system** that notifies objects in the world to handle events.
- Spearheaded development of Shoot-em up game using this engine.

**Latency Compensation in Cloud-Based Game Streaming – Unreal Engine, C++, Blueprints**

- Constructed **control assistance** techniques in a Bullet Hell Game named Spectres, implementing a **force-based movement assistance** technique for dodging bullets during latency.
- Devised a **Bullet Magnetism** technique to improve players' shooting accuracy under varying latency conditions.
- Conducted experiments to assess Quality of Experience (QoE) with varying latency levels, aiming to enhance cloud-based gaming.

**3D Rendered Scene – JavaScript, WebGL**

- Engineered **Pong** and **Gouraud** lighting techniques on the lamp, displaying advanced rendering capabilities.
- Developed dynamic reflection and refraction effects on the ornament and car faces, utilizing **WebGL** shaders.
- Orchestrated real-time toggling of shadows, lighting, movement, reflection, and refraction, demonstrating advanced interactive controls.