SAI SUSHANT KORANNE

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EDUCATION

DePaul University   Chicago, IL
Master of Science in Game Programming (STEM), CDM   *2025-2027*

Vellore Institute of Technology   Vellore, India
Bachelor of Technology in Computer Science Engineering   *2017-2021*

WORK EXPERIENCE

SuperHuge Studio-Xarpie Solutions   Bengaluru, India
Game Developer   *November 2022 – June 2024*
- Collaborated with game designers, artists, and animators to create unique gaming experiences.
- Developed 2D and 3D games using Unity 3D and C#.
- Worked with the QA team to resolve bugs and ensure the game has a minimal number of bugs.

Cognizant Technology Solutions Pvt. Ltd   Hyderabad, India
Programmer Analyst   *August 2021 - November 2022*
- Managed git repositories.
- Built and managed CICD pipelines and the Docker Images Repository.
- Maintained the servers where the application is deployed and managed Product Backlog Items.
- Built and maintained PowerShell automation scripts for local deployment.

PROJECTS

Game Engine (Using Dx11) – InProgress
- Developed a custom 3D game engine in C++ by abstracting DirectX 11, including the implementation of features like 3D model, texture, and UV map loading, along with transformations for scene manipulation. This showcases a strong understanding of low-level graphics programming and engine architecture.
- Built a game engine from scratch in C++ and implemented custom math, file, and ECS libraries to facilitate core 3D graphics functionalities like 3D model loading, texture application (including UV mapping), and object transformations. This demonstrates deep technical proficiency in C++ and fundamental game engine principles.

Space Invaders (Custom Game Engine - C#)
- Architected and developed a Space Invaders game using a custom C# engine, implementing key design patterns (e.g., Factory for enemy/bullet creation, State for enemy behaviors) to create a modular and extensible gameplay experience.
- Leveraged design patterns such as Factory, Observer, and State within a custom C# engine to build a Space Invaders game featuring sprite-based rendering, real-time collision detection.

Audio Engine (Multithreading - Academic):
- Developed a high-performance, multithreaded audio engine in C++ using the XAudio2 API, implementing asynchronous real-time audio streaming, dynamic priority systems, and custom threading components.
- Engineered a robust audio solution featuring seamless transitions, user-defined callbacks, and data-driven playback, demonstrating expertise in multithreaded system design and XAudio2 utilization.

Obstacles Path (Unreal)
- The player navigates a path with obstacles that move vertically, horizontally, and can rotate and sweep to reach a final destination.

Warehouse Wreckage (Unreal)
- A simple projectile-based game where players spawn and launch spherical projectiles to hit and knock down cans.

Multiplayer Top Spin Game (Unity)
- An Android multiplayer game where players battle with tops.
- The game uses PUN2 for multiplayer functionality, with RPC for connections.
- Players lose speed when they dash against each other, and a player loses when their speed becomes zero.

Racing Game Using Reinforcement Learning (Unity)
- A flight racing game where enemy agents are trained using Reinforcement Learning.
- The agent receives a positive reward for passing through a checkpoint and a negative reward for missing one.

Maniacs (Unity)
- A horror survival game where the player is spawned in a dark location.
- Zombies spawn from random locations, chase, and attack the player.
- The player can collect various melee and shooting weapons to kill the zombies.

SKILLS

- **Game Engines:** Unity, Unreal Engine
- **Programming Languages:** C#, C++, Java, C
- **VCS:** Git, Helix-P4V