VISHNU B

Game Developer Using Unity

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Self-taught Unity developer passionate about building immersive 2D and 3D game experiences. Developed multiple projects from scratch using C#, Unity, and Blender, implementing systems like multiplayer networking, AI behaviors, AR/VR features, and performance optimization. Thrives in creative environments, learns new technologies quickly, and enjoys turning game ideas into polished and engaging experiences for players.

Skills

Technical Skills

- Programming Languages: C#, HTML, CSS
- Unity Skill Set: 2D and 3D Game Development, AR, VR, Cinemachine, Animator Controller, Animations, Shader Graph, Post-processing, Ad Integration, HDRP, URP, Unity Timeline, Audio Manager, AI System, Ragdoll
- Performance & Optimization: Profiler, Object Pooling, Occlusion Culling, Batching Techniques, Texture Compression, Sprite Atlas, Async Loading, Script Optimization, UI Optimization
- Physics & Gameplay: Character Controller, Wheel Colliders, Particle Systems, Splines, RayCast
- Programming Concepts: Data Structure and Algorithms, Object-Oriented Programming (OOP)
- Version Control: Git, GitHub, Unity Version Control

Projects

Multiplayer FPS Game – Lone Wolf Legacy

Real-time online shooter built to master advanced networking, backend integration, and AI in Unity

- Developed a multiplayer infrastructure using **Photon PUN 2**, handling lobby management, room creation, and low-latency player synchronization.
- Integrated **Google Firebase Authentication** for secure user login, registration, and persistent player data management.
- Designed an interactive **In-Game Shop** featuring smooth UI animations for weapon selection, virtual currency transactions, and item unlocking.
- Engineered intelligent **AI Bots** using **Unity NavMesh** for tactical pathfinding and finite state machines, synchronizing randomized loadouts via RPCs.
- Built a dynamic **Leaderboard System** and responsive **Minimap** that tracks real-time stats for both human players and AI.
- Implemented **Cinemachine** for immersive first-person camera mechanics and precise raycast-based shooting.

Turbo Drive – Car Parking Game

3D parking simulation game set in realistic night-time city environment with detailed urban scenery and elevated parking platforms

- Implemented realistic vehicle physics using **Unity Wheel Colliders** for smooth turning, suspension, and accurate friction handling.
- Designed **timer and point collection system** to add challenge and strategy, with UI displaying objectives, remaining time, and controls.
- Developed **AI-driven pedestrian behavior** using **waypoint-based movement**.
- Used **Observer pattern** to manage level completion events and UI updates such as timers and goals.
- Added dynamic audio and enhanced visuals using **Unity's URP** for immersive lighting and effects.

Dranko's Quest – 2D Platform Runner

Fast-paced 2D platformer with reactive traps and obstacles, featuring optimized systems with 7 levels

- Implemented **object pooling**, responsive input, and full **health and damage system**.

- Added custom audio for traps, player actions, and environment events with **singleton-based audio system**.
- Designed dynamic traps (including player-chasing traps) and **AI patrol enemies** using **waypoint movement**.
- Developed **moving platforms**, point collectibles, and door unlock system that triggers only after all points are collected.
- Included score system with UI updates, using **2D physics** and visual feedback to enhance player immersion.

Mini Projects

VR Engine Assembly Simulator - Unity XR Interaction

- Built with **Unity VR toolkits**, including teleportation, **grab interaction**, and **socket snapping**.
- Implemented interactive nuts, wrenches, and tools with **physics-based manipulation**.
- Added **tutorial UI panels** with step-by-step assembly instructions.
- Designed intuitive VR controls for teleportation and object placement using **motion controllers**.
- Used VR simulation framework to enhance realism in training-style environment.

AR Basketball Game

Swipe-based AR mobile game where players throw balls into hoop using real-world surface detection and interactive gameplay

- Developed using **AR Foundation** and **XR Toolkit** for accurate surface scanning and AR object placement.
- Enabled dynamic hoop placement by tapping on **scanned surfaces**.
- Integrated **swipe mechanic** for smooth and responsive ball throwing.
- Added **score counter** with particle effects and sound feedback for successful shots.
- Included reset feature to reposition hoop for improved replayability.

Loop Escape – Endless Runner

Infinite runner inspired by Temple Run, featuring procedurally generated levels

- Built an endless-runner environment inspired by Temple Run, featuring **procedurally generated paths** and dynamic obstacles.
- Implemented procedural path generation for endless obstacles and collectibles.
- Smooth character animation using **Animator blend trees**.
- Integrated **responsive input handling** for precise player control.
- Build an environment similar to Temple Run.

White Death – 3D Action Shooter

Third-person shooter built in Unity with realistic visuals, AI and cinematic elements

- Used **Unity URP** for improved visuals and lighting quality.
- Implemented **RayCast-based shooting** with accurate hit detection.
- Added **Cinemachine camera** and **Timeline cutscenes** for cinematic feel.
- Built **NavMesh-based enemy AI** for smart movement and chasing.
- Integrated **ragdoll physics** for realistic enemy death reactions.

Education

Game Development using Unity Apr 2024 – Present
Brototype, Kerala

- Intensive hands-on bootcamp focused on Unity game development, C# programming, and game design principles.
- Built multiple real-world gaming projects including 2D/3D games, AR/VR applications, and multiplayer systems.
- Strengthened skills in game architecture, version control (Git/GitHub), and performance optimization.

BCA (Bachelor of Computer Applications) July 2018 – May 2021
Kerala University,(Appearing)

- Bachelor's degree focused on programming, databases, and computer systems. Transitioned into game development via self-learning and passion for interactive media.