Aman Singh

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SUMMARY OF QUALIFICATION

- Unity Gameplay Programmer with hands-on experience building 2D, 3D, and VR games in Unity using C#. Skilled in implementing player mechanics, AI behaviors, game feel, debugging and interactive systems across multiple projects. Strong collaborator with cross-disciplinary teams, delivering responsive and immersive gameplay experiences through rapid iteration and user-centered design.
- Languages/Tools: C#, C++, Python, Kotlin, Java, HTML, CSS, Unity, Maya, Figma, Adobe Suite, Figma, Eclipse, Git.

EDUCATION

Bachelor of Arts, Double Minors, Computing Science & Interactive Arts and Technology Sept 2019 - Dec 2024
Simon Fraser University Burnaby, BC
Cumulative GPA: 3.03; Dean's Honor Roll 2023(Spring)

TECHNICAL PROJECT EXPERIENCE

Advanced FPS Jetpacking Movement Dec 2024 – Present
Gameplay Programmer

- **State-Driven Locomotion & Traversal Mechanics**: Engineered a modular movement system with sprinting, crouching, air states, and slope-aware speed control. Integrated wall running using vector math and custom gravity to enable fluid traversal across inclined surfaces and vertical walls.
- **Jetpack & Jumping Systems**: Implemented a fuel-based jetpack system tied into player movement logic, enabling vertical lift and airborne state transitions. Developed jump/crouch mechanics with cooldowns and collider scaling for responsive physics-based movement.
- **Immersive FPS Camera Controller**: Built a first-person camera system with separate yaw/pitch tracking, clamped rotation, and anchor-based camera alignment for smooth transitions and precise input-driven orientation.

Slow & Steady-Rogue-like 2D Shooter Game Sept 2023- Jan 2024
Gameplay Programmer & AI Developer

- **Combat & Player Systems:** Built a full-featured shooting system with raycast logic, bullet tracers, camera shake, and damage feedback. Integrated a slow-motion ability tied to an energy bar, dynamically altering time scale and camera behavior for cinematic combat moments.
- **Enemy AI & Behavior Design**: Developed a state-driven A* pathfinding system enabling enemies to patrol, chase, and attack dynamically. Implemented diverse enemy types, including turrets with projectile logic, AoE debuffers, coroutine-based damage dealers, and enemies with multi-phase behavior.
- **Wave Spawning & Game Flow Control**: Engineered a modular wave spawning system that managed enemy spawn queues, randomized spawn locations, and tracked wave progression by detecting enemy clear conditions.

The Storge- Horror 2D Game Sept 2023 – Dec 2023
Gameplay Programmer

- **Player & Interaction Systems**: Built a polished top-down controller with animation blending, footstep audio randomization, and Rigidbody2D physics. Implemented a responsive health system with damage timing synced to animation frames and diegetic UI for visual feedback.
- **Advanced Enemy AI & State Machines**: Designed a multi-state AI system using A* pathfinding and animation-driven transitions. Enemies patrolled, chased, and attacked based on player proximity and cooldown logic, with dynamic behaviors like noise-luring, path rerouting, and ranged attacks to intensify horror gameplay.
- **Immersive Audio-Driven Gameplay**: Designed immersive audio elements such as footsteps, ambient sounds, and interaction-based effects to elevate horror tension.

Paradox Rift- VR Exploration Game Jan 2024 – April 2024
Gameplay Programmer & VR Developer

- **Modular VR Interactions & Locomotion Systems**: Implemented XR-based teleportation, two-handed grab logic, jump functionality, and realistic hand pose animations using Unity's XR Interaction Toolkit. Developed VR-specific weapon handling physics-based projectile firing to create tactile, immersive interactions.
- **AI Systems with Dynamic State Management**: Designed a modular AI system using interface-driven state machines for patrolling, tracking, and attacking. Integrated custom line-of-sight and proximity detection using raycasts, NavMesh pathfinding, and UnityEvents to enable responsive, scalable enemy behavior.