# Aman Singh

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## Profile

Game Developer skilled in Unity and Unreal Engine, with experience using Blender for asset creation and engine integration. Strong focus on gameplay mechanics, AI behavior, physics systems, and performance-optimized interactive experiences. Passionate about responsive controls, clean gameplay architecture, and scalable real-time systems.

## Core Skills

- **Game Engines:** Unreal Engine, Unity
- **Programming Languages:** C++, C#, Python
- **Gameplay Systems:** Player Controllers, Weapon Systems, AI Behavior, State Machines, Physics, Collision Systems
- **AI & Logic:** Behavior Trees, Finite State Machines, Pathfinding Basics
- **Graphics & Assets:** Blender (Modeling, Asset Integration), Materials, Textures
- **UI / UX Tools:** Figma (UI Design, Prototyping, HUD Mockups)
- **Performance & Optimization:** Profiling, Level Streaming, Asset Optimization
- **Version Control:** Git, GitHub
- **Platforms & OS:** Unix/Linux, Windows
- **Tools & IDEs:** Visual Studio, Unreal Editor, Unity Editor

## Projects

### Project Sentinel — Tactical FPS (Unreal Engine)

- Developed a tactical first-person shooter emphasizing responsive gunplay, player movement, and precision-based combat.
- Implemented player controllers, weapon systems, recoil, hit detection, and shooting logic using Blueprints and C++.
- Designed AI enemy behaviors with state-based logic for patrol, engagement, and combat response.
- Built HUD systems including health, ammo, and crosshair for clear real-time feedback.
- Optimized gameplay performance through efficient blueprint architecture and physics tuning.

### Lost Frontier — Open-World Survival & Treasure Hunt (Unreal Engine)

- Developed an open-world exploration and treasure-hunt game focused on large-scale environments and discovery-driven gameplay.
- Implemented traversal, stamina systems, inventory logic, item pickups, and interactive world objects.
- Designed quest-driven treasure mechanics using environmental clues and progression-based rewards.
- Integrated AI-driven wildlife and enemy behaviors for roaming, detection, and combat encounters.
- Optimized open-world performance using level streaming and efficient asset management.

### Real-Time Sign Language Recognition System

- Built a real-time gesture recognition system using CNNs with live camera input.
- Implemented frame capture, hand segmentation, and real-time inference using OpenCV.
- Improved model accuracy using data augmentation, dropout, and normalization techniques.

## Education

- Bachelor of Computer Applications Gaming & Graphics — Presidency University, Bangalore
- G.Rio School Kohima,Nagaland