

# Abhilash Saji

Unity Developer — C# Programmer

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🌐 [in/AbhilashSaji](#) 🌐 [Portfolio/AbhilashSaji](#)

## Profile

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Unity Developer with hands-on experience building, implementing, and refining core gameplay systems for 2D, 3D, AR, and VR applications using Unity Engine and C#. Focused on gameplay programming, asset integration, gameplay detailing, UI systems, animations, physics, and scene management, with proven ability to optimize performance, debug complex behaviors, and deliver polished, immersive real-time experiences through testing, version control, and cross-platform deployment.

## Technical Skills

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- **Programming Language:** C#, OOP, Interfaces, Delegates, Events
- **Gameplay & Systems:** Gameplay programming, character controller mechanics, raycasting and shooting systems, inventory and weapon switching, object pooling, singleton pattern, observer pattern, factory pattern
- **Animation, Physics & Movement:** Animator controllers, blend trees, ragdoll physics, Rigidbody & colliders, wheel colliders
- **AI & Navigation:** NavMesh navigation, NavMesh agents, enemy AI behavior, State machine pattern
- **UI, Input & Level Design:** UI systems using Canvas and UI Toolkit, player input for PC and mobile platforms, terrain tools, tilemaps, and level design principles
- **Performance & Workflow:** Unity Profiler, memory optimization, batching & draw calls, occlusion culling, GPU instancing, Scriptable Objects, Git & GitHub, PC / Android builds

## Projects

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### First-Person Horror Shooter Game (Unity 3D, C#)

- Engineered a mission-based first-person horror shooter in Unity with ghost combat and banishing mechanics, implementing enemy AI using state machine patterns, events, and state-based sound effects.
- Integrated core gameplay systems including raycasting-based combat, character controller, Rigidbody physics, hit detection, health auto-refill, inverse kinematics, head-bob, and animation-driven interactions.
- Enhanced the horror experience using terrain tools, dynamic lighting, fog, particle systems, ambient audio, and sound effects, while optimizing performance for smooth gameplay.
- Developed a polished UI system featuring an animated main menu, interactive UI panels, and UI sound effects, ensuring stable frame rates and responsive user experience.

**Playable Build:** [Play](#)

### Third-Person Mission-Based Shooter Game (Unity, C#)

- Architected a mission-based third-person shooter (TPS) with structured gameplay flow, implementing enemy AI behaviors such as scouting, patrolling, chasing, and shooting for varied combat encounters.
- Programmed and integrated raycasting and projectile-based combat systems using character controller, Rigidbody physics, reload systems, reload animations, hit detection, and player-enemy health bars for responsive TPS gameplay.
- Orchestrated TPS animation systems including crouch, prone, and shooting animations, blend trees, inverse kinematics, particle effects, hit effects, and atmospheric sound to enhance combat feedback.
- Prototyped and developed interactive systems such as inventory management, health pickup and auto refill, mission timer, and player interaction mechanics, refining gameplay balance and overall experience.

**Playable Build:** [Play](#)

Endless Runner Game (Unity, C#)

- Constructed an endless runner gameplay loop inspired by a Tom and Jerry-style concept, using colliders and trigger-based logic for continuous level flow and obstacle handling.
- Designed core systems including obstacles, coin collection, score and distance-based tracking, difficulty scaling, and responsive player collision handling for arcade-style gameplay.
- Enhanced player experience through character animations, smooth movement controls, basic UI elements, and restart/game-over systems, delivering clear gameplay feedback.

Playable Build: [Play](#)

2D Platformer Game (Unity, C#)

- Built a level-based 2D platformer with spawn and end points, sequential level progression, and increasing difficulty to support structured stage-based gameplay.
- Configured core 2D systems including sprite animations, jump and slice animations, camera follow, and collision-based obstacle handling for responsive platformer controls.
- Introduced a points-based scoring system featuring a unique bamboo-cutting mechanic that awards bonus points, alongside additional obstacles and hazards to enhance challenge and engagement.

Playable Build: [Play](#)

Education

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<b>Game Development in Unity</b> Malger Entertainments, Kochi, Kerala	<b>Kerala, India</b> 2025 – 2026
<b>Game Development</b> Skill India and NSDC – Issued by Avodha Edutech Private Limited	<b>Online, Kerala,India</b> 2024-2025
<b>Bachelor of Commerce (B.Com)</b> Indira Gandhi National Open University (IGNOU)	<b>India</b> 2023 – Present
<b>Diploma in Financial Accounting</b> Sree Sankaracharya Computer Centre, Sulthan Bathery, Kerala	<b>Kerala,India</b> 2021-2023

Certifications & Learning

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- **Game Development in Unity** - Malger Entertainments, Kochi, Kerala
- **Game Development** - National Skill Development Corporation (NSDC) – Skill India

Languages

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- English
- Malayalam