

# Pratyush Soni

Computer Science Undergraduate  
Greater Noida, Uttar Pradesh, India | +91 8168547911 | pratyushsoni1704@proton.me  
[Linktree](#)

---

## SUMMARY

Computer Science undergraduate with a strong focus on Unity simulation, game development, real-time systems, and performance-oriented programming. Experienced in building gameplay systems using state machines, coroutines, and modular C# architecture. Hands-on experience with procedural content generation, shader programming and interactive simulations. Actively involved in technical leadership and collaborative development environments.

---

## SKILLS

**Game Engines:** Unity (3D/2D), Godot

**Programming Languages:** C#, C/C++, Java

**Gameplay Systems:** State Machines, Coroutines, Event Driven Architecture, New Input Systems

**Game Development Concepts:** Procedural Content Generation, Pathfinding (A\*), Physics, Performance Optimization

**Tools:** Git, GitHub, Visual Studio, VS Code, Blender, Unity Editor Tools

---

## PROJECTS

### Procedural Terrain Generation & Navigation System | Unity, C#

- ▣ Designed and implemented procedural 3D terrain generation using layered Perlin Noise with adjustable parameters
- ▣ Generated dynamic meshes from heightmaps with UV mapping and normal recalculation for realistic lighting
- ▣ Integrated A\* pathfinding with elevation-based traversal costs for navigation on uneven terrain
- ▣ Developed custom Unity Editor tool and modular C# components to enable real-time tuning and rapid iteration

### Finite-state machine | Unity, C#

- ▣ Designed and implemented a modular finite state machine (FSM) architecture to manage player and AI behavior states such as Idle, Move, Attack, and Transition.
  - ▣ Built event-driven state changes based on input, animation events, and environmental triggers, improving gameplay responsiveness and maintainability
  - ▣ Structured the system to support easy debugging and rapid iteration during gameplay testing.
- 

## EXPERIENCE & LEADERSHIP

### Vice President – Fusion Tech Club | Amity University

July 2025 – Present

- Organized and executed large-scale technical events including Ideathon (80+ participants) and Codathon 2.0 (200+ participants)
  - Coordinated with teams across development, logistics, and outreach to ensure smooth execution of events
  - Mentored peers and promoted hands-on learning through workshops and collaborative projects
-

## **EDUCATION**

**Bachelor of Technology in Computer Science and Engineering** Amity  
University, Greater Noida, Uttar Pradesh  
Expected Graduation: 2026