Antonino Caracci

GameplayProgrammer – Unreal Engine C++

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Portfolio | GitHub | LinkedIn | YouTube

About Me

Gameplay Programmer specialized in Unreal Engine, with expertise in C++ gameplay systems, AI programming, and character interaction mechanics. Focused on building robust gameplay architectures using Unreal's C++ API, Gameplay Framework, and Blueprint scripting for rapid iteration and optimization, design patterns, and data-oriented techniques. Experienced in prototyping and delivering gameplay features such as AI behaviors, interaction systems, and advanced animation mechanics (IK & State Machines). I aim to combine technical depth with design awareness to deliver responsive and immersive player experiences.

Technical Skills

Programming:
C++, C#, Python, OOP, Design Patterns, Code Optimization

Engines & Tools:

Unreal Engine (primary), Unity, Blueprints, JSON, XML, Blender, Git

Core Areas:

Gameplay Systems, AI Programming, Interaction & Animation, Procedural Systems, Data-Driven Design

Languages:

Italian (Native), English (Intermediate), Portoguese (Intermediate)

Education

Accademia Italiana dei Videogiochi (AIV) – *2021–2024*
Workshop: Multi-Agent AI – From Design to Implementation

Secondary School – *2016–2021*

Diploma in Industrial Electronics and Electrical Engineering – Automation

Main Projects (Unreal Engine)

"Voxel World Generator" *– Procedural Terrain System (Technical Prototype)*
About: Voxel Worlds in Unreal Engine. Developed: Unreal Engine 5 (C++).

- Implemented Greedy Meshing for efficient rendering of cube-based voxel terrain (Minecraft-like).
- Created Marching Cubes algorithm for smooth, organic voxel surfaces (curves, caves, transitions).
- Designed biome layering system (stone, dirt, grass) and GPU instancing for real-time terrain modification.
- Combined asynchronous meshing, procedural generation, and data-driven materials for extensible voxel worlds.

"Draining Woods" *– TPS Game (Global Game Jam 2023)*
About: Managing AI Using Blackboard in Unreal 5. Developed: Unreal Engine (Blueprint & C++).

- Built a complete AI Behavior System using Blackboard and Behavior Trees, allowing dynamic enemy responses to player actions.
- Designed modular shooting and input systems in C++ compatible with both AI and player controllers.
- Integrated Inverse Kinematics (IK) and procedural climbing mechanics via animation blending.
- Worked with a 5 member interdisciplinary team optimizing gameplay clarity and systemic integration.

Game Page

Unity Projects

"Wild Clone West" *– Third-Person Action Prototype Developed: Unity (C#).*

Implemented gameplay systems for quests, vaulting, AI, and climbing mechanics. Designed interaction behaviors driven by animation state machines and trigger-based events. Used IK blending and procedural animation adjustments for fluid character motion. Collaborated in a small team, focusing on efficient feature integration and clear project structure.

Video Showcase

Portfolio

Project breakdowns and source code here.