SHAURYA BHATNAGAR

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PROFESSIONAL SUMMARY

Gameplay Programmer with shipped commercial experience in Unreal Engine 5 and Unity. Specializes in architecting modular gameplay systems, optimizing rendering pipelines for mobile/console performance, and reducing technical debt. Proven track record of increasing mobile framerates by 50%+ through draw call optimization and eliminating garbage collection spikes. Experienced in C++ and C# architecture, replication/networking foundations, and building robust tools that empower design teams.

TECHNICAL SKILLS

Languages: C++, C#, Python, Blueprints (Visual Scripting)

Engines: Unreal Engine 5 (C++ & Blueprints), Unity (URP, DOTS)

Performance & Tools: Memory Management, Profiling (Unreal Insights/RenderDoc), GC Optimization, Git, Perforce, SmartSVN, Jira

Gameplay Systems: Serialization (Save/Load), AI Behavior Trees, Network Replication, Animation Systems (AnimBP), Physics Logic

PROFESSIONAL EXPERIENCE

Easley-Dunn Productions | Lead Tech Artist / Programmer (Jan '25 - Nov '25) | *Robot Race (Unity)* - iOS | Android

- **Optimization:** Spearheaded a critical performance pass for mobile architecture, reducing draw calls via mesh combining and eliminating GC spikes, resulting in a 52% framerate increase (23 to 35 FPS) on target devices.
- **Systems Engineering:** Programmed modular C# systems for dynamic camera behavior (FOV shifts, impulse shakes) and gameplay VFX, bridging the gap between engine constraints and artistic intent.
- **Pipeline Tools:** Migrated rendering architecture from Built-in to URP, authoring custom Shader Graphs to replace expensive legacy logic resolving persistent shadow artifacts and reducing GPU overhead while maintaining visual fidelity.
- **Leadership:** Led a multidisciplinary team of 5, managing task delegation, QA pipelines, and release management via Assembla/SmartSVN repositories.

Dead Petal Games | Gameplay Programmer (May '25 - Nov '25) | *Nonplace (Unreal Engine 5)* - Steam Demo | Itch Vertical Slice

- **Architecture:** Implemented a persistent state management system extending USaveGame in C++ and blueprints, tracking global inventory, narrative choices, and level streaming states across multiple sessions.
- **Tools Development:** Engineered a component-based Interaction System using C++ Interfaces to decouple game logic, allowing designers to implement 30+ unique interactable objects without programmer intervention.
- **Performance:** Implemented dynamic Level Streaming and Lightmass scenarios to optimize memory usage for the Steam Deck, maintaining a locked 90 FPS.
- **AI Logic:** Developed complex AI navigation logic using NavMesh and Behavior Trees for dynamic enemy stalking, balancing performance with player challenge.
- **Metrics:** Developed the Vertical Slice responsible for winning 2nd Place in the Liminal Game Jam 2025 and achieving 1,400+ units claimed on Steam post-launch.

PROJECTS

Contortion | Unity (C#) | Gameplay Engineer | Play Web Build

- **Physics Systems:** Implemented custom 2D physics-based mechanics, including a robust "Crushing System" to handle complex collision edge-cases and gravity manipulation.
- **Analytics:** Integrated Firebase Analytics to track player death coordinates, using data to identify level design bottlenecks and improve player retention.
- **Tools:** Designed and scripted 10+ puzzle levels, utilizing custom editor tools to streamline the level design workflow.

EDUCATION

University of Southern California | Los Angeles, USA | M.S. in Computer Science | Jun. 2023 – Dec. 2024

Amity School of Engineering and Technology | Noida, India | B.Tech in Computer Science and Engineering | Jul. 2017 – Dec. 2021