SHAURYA BHATNAGAR

shauryabhatnagar162011@gmail.com| [LinkedIn](#) | [Portfolio](#)

PROFESSIONAL SUMMARY

Technical Designer and **Unreal Engine 5 Specialist** with shipped commercial experience. Expert in bridging the gap between artistic vision and technical implementation through tool creation and shader development. Proven track record of optimizing render pipelines for mobile performance **(50%+ framerate increase)** and architecting modular gameplay systems that empower design teams.

TECHNICAL SKILLS

Engines & Tools: Unreal Engine 5 (Blueprints & C++), Unity (URP, C#), Blender, Shader Graph, Level Sequencer, UMG

Design & Scripting: Visual Scripting, System Architecture, Rapid Prototyping, 3D Math, AI Behavior Trees

Pipeline & Optimization: Profiling (Unreal Insights/RenderDoc), Draw Call Reduction, Level Streaming, Git/Perforce

Analytics & Data: Firebase Analytics, Save/Load Serialization, Gameplay Telemetry

PROFESSIONAL EXPERIENCE

Easley-Dunn Productions | Lead Technical Artist / Gameplay Programmer (Jan '25 - Nov '25) | *Robot Race (Unity)* - [iOS](#) | [Android](#)

- **Game Feel & VFX:** Programmed "juicy" feedback systems including dynamic FOV shifts, impulse-driven camera shakes, and particle VFX to enhance combat satisfaction
- **Render Pipeline:** Migrated project from Built-in to Universal Render Pipeline (URP), authoring custom shaders to resolve artifacts and improve GPU performance
- **Performance:** Achieved a 52% FPS increase (23 to 35) on mobile by implementing mesh combining to reduce draw calls and optimizing C# hot loops
- **Level Design:** Owned lighting and set dressing for 3 maps; baked light probes and created custom emissive maps to visually guide players along the track

Dead Petal Games | Gameplay Programmer / Technical Designer (May '25 - Nov '25) | *Nonplace (Unreal Engine 5)* - [Steam Demo](#) | [Itch Vertical Slice](#)

- **Interaction Architecture:** Architected a component-based system using C++ Interfaces, allowing designers to create 30+ unique interactable props without programmer intervention
- **Optimization:** Implemented Level Streaming logic and baked Lightmass Scenarios to maintain a locked 90 FPS on Steam Deck
- **State Management:** Built a robust serialization system extending USaveGame to track granular world states (inventory, choices) across play sessions
- **UI Implementation:** Developed Widget-based inventory and interaction UIs using UMG, featuring dynamic zoom mechanics and diegetic overlays
- **AI & Logic:** Scripted complex environmental puzzles (keypads, bell sequences) and enemy stalking behaviors using NavMesh/Behavior Trees

- **Metrics:** Vertical Slice won **2nd Place in Liminal Game Jam 2025**; achieved **1,400+ units claimed** on Steam within two weeks

PROJECTS

Contortion | Unity (C#) | Gameplay Engineer / System Designer | [Play Web Build](#)

- **Mechanic Design:** Prototyped a 2D map-flipping mechanic, designing a custom "Crushing System" to handle physics collisions when geometry rotates 90 degrees
- **Data-Driven Iteration:** Integrated **Firebase Analytics** to generate heatmaps of player deaths, using data to identify difficulty spikes and re-balance levels
- **Tools:** Developed custom editor scripts to streamline the creation of 10+ puzzle levels, significantly reducing setup time for new maps

EDUCATION

University of Southern California | Los Angeles, USA | M.S. in Computer Science | Jun. '23 – Dec. '24

Amity School of Engineering and Technology | Noida, India | B.Tech in Computer Science and Engineering | Jul. '17 – Dec. '21