Raghav Suriyashekar

Graphics Programmer and Gameplay Developer

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Game developer specializing in real-time graphics, performance optimization, and core gameplay systems. Skilled in Unity, shaders, GPU instancing, and procedural generation with proven success in delivering highly performant mobile and console experiences. Driven by a passion for solving complex problems through logic, mathematics, and physics to build immersive, optimized, and scalable games.

Unity | C# | C++ | HLSL/Shader Programming | GPU Instancing | Procedural Generation | Gameplay Systems | Tools Development | Mobile Optimization | Console Development | Physics Simulation | Ray-Tracing | Game AI

WORK EXPERIENCE

Gameplay and Tools Developer | May 2023 - May 2024 | Nextwave Multimedia Pvt. Ltd

- Developed and optimized a high-performance mesh-based shadow system utilizing GPU Instancing and per-instance properties to maintain 60+ FPS on the mobile platform with complex scenes.
- Ported core input scheme and control mappings to a console platform for an unreleased title.
- Architected and prototyped a rail-shooter platform and multiple modular gameplay systems, including a traversable dungeon with seeded randomization and a modular turret system.
- Implemented a fully procedurally generated and animated creature (spider).
- Designed and developed the touch-based input scheme for the Cricket Blitz mobile game.

Junior Unity Developer | May 2022 - May 2023 | Nextwave Multimedia Pvt. Ltd

- Designed and delivered a highly performant crowd/audience rendering solution utilizing GPU Instancing, enabling dynamic randomization of unit appearance and actions while maintaining 60+ FPS on the Mobile platform.
- Developed and implemented an advanced algorithm to convert 2D screen gestures into collision-aware 3D world-space paths.
- Engineered an editor-based object placement system with functionality for exporting and editing level layouts and configurations.

Prototype Developer Intern | Jan 2022 - May 2022 | Nextwave Multimedia Pvt. Ltd

- Developed a seeded procedural dungeon generation system with robust, data-driven rules for creating unique and feature-rich worlds.
- Optimized editor workflow and project efficiency, resulting in reduced compilation times through the strategic use of assemblies.

PROJECTS

Aural Fields - CI7800 Digital Media Final Project - Kingston University

Engineered a custom Real-time ray-traced spatial Audio solution that generates a dynamic, environmentally aware, and reactive soundscape.

BOSSBORNE - CI7500 3D Games Programming - Kingston University

Built a Boss Rush game with procedurally generated terrain, leveraging OpenAI's Chat-GPT API to generate quests, items, and power an in-game companion using voice commands.

Profit Pits - CI7825 Connected Games- Kingston University

Engineered a core visual and level generation pipeline for an Online Co-op multiplayer mining game. Features include procedurally generated caves, SDF-based merging view visuals (shaders), and instantiation of mineable elements and environmental hazards.

EDUCATION

Kingston University, London, United Kingdom | 2025   expected Distinction
Master of Science - Game Development (Programming)

SRM Institute of Science and Technology, Tamil Nadu, India | 2021   8.31 CGPA
Bachelor of Technology - Computer Science and Engineering