Hemal Patel

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PROFESSIONAL SUMMARY

Senior Gameplay and Systems Engineer with over 11 years of experience architecting robust multiplayer systems and scalable gameplay frameworks for high-profile live-service (GAAS) and standalone titles. Expert in Unreal Engine and Unity, with a proven track record of optimizing low-level engine performance (achieving 80%+ gains) and developing proprietary editor tools that significantly boost studio productivity. A collaborative technical leader dedicated to bridging the gap between creative design and engineering execution, while fostering excellence through mentorship and rigorous standards in globally distributed environments.

SKILLS

Languages: C++, C#, Lua
Game Engines: Unreal 4, Unreal 5, Unity
Programming Skills: Gameplay Systems, Gameplay Ability System (GAS), Multiplayer Networking, Live Service (GAAS), UI Systems, MVVM, Multithreading, Vector Math
Core Competencies: System Architecture, Technical Leadership, Mentoring, Cross-discipline Collaboration, Performance Profiling
Tools: Perforce, Github, BuildGraph, Automation Tools, Visual Studio, Rider, VSCode, JIRA
AI Tools: Claude, Gemini, Copilot

SHIPPED TITLES

Wave Beta (Meta Quest, PCVR) | **Wave Standalone** (PICO) | **Alimentary Avengers** (Mobile)
Tafe Planetary Plus (Mobile) | **E-Smart** (Mobile) | **Be Safe, Be Smart!** (Mobile)

EXPERIENCE

Software Engineer II (Senior Gameplay / Systems Focus)   Nov 2019 – Dec 2025
WaveXR   *Remote*

- Shipped the **Wave Beta** application, a live-service virtual concert platform, facilitating regular content updates and feature expansions to a global user base.
- Played a key role in shaping the technical direction for 'Nexus', a foundational social ecosystem, by architecting scalable C++ frameworks and interaction models that became the core standard for future features.
- Partnered closely with design and art leadership to bridge high-level creative vision with hands-on engineering, delivering innovative gameplay features for a live-service (GAAS) environment.
- Established and maintained engineering standards and best practices, conducting rigorous code reviews to drive code quality, reduce technical debt, and ensure long-term sustainability.
- Mentored multiple engineers across gameplay and tools, fostering professional growth and ensuring technical excellence throughout the development pipeline.
- Architected server-authoritative multiplayer systems, enabling complex state synchronization and dynamic visual updates across persistent, live server instances.
- Improved engineering practices and pipelines by developing proprietary Unreal Editor tools, reducing art workflow time by 30% and significantly boosting studio efficiency.
- Defined performance targets and optimized core systems using Unreal Insights, achieving over 80% performance gains in memory management and rendering for PC and VR platforms.
- Executed rapid prototyping to validate gameplay mechanics, allowing the team to fail fast and pivot effectively, ensuring resources were focused on high-value solutions.
- Helped the team successfully transition from Unity to Unreal, simultaneously architecting core interaction features like Custom Niagara Components to support complex visual requirements.
- Integrated backend services (user accounts, party systems) with gameplay logic, ensuring reliable cross-platform data synchronization for a seamless online experience.

Contract Unity Programmer   Nov 2015 – Feb 2020
Razor Edge Games   *Remote*

- Engineered core gameplay loops including turn-based combat, inventory, and survival mechanics, implementing custom logic for dynamic boss encounters and player tracking.

- Led the integration of open-source hair/fur simulation and holographic UI shaders, troubleshooting complex mesh-to-spline data format conflicts.
- Created custom internal tools that streamlined the content creation pipeline, reducing iteration time for artists and designers on a large-scale open-world project.

Unity Developer Jun 2014 – March 2015

Smartcloud Infotech Pvt. Ltd. *Pune, India*
- Developed and launched multiple interactive commercial applications on mobile platforms using Unity, adhering to strict client requirements and timelines.
- Consulted with clients to define project scope and provided accurate project estimations, along with process improvement suggestions.
- Implemented and iteratively refined UI/UX and gameplay features based on direct client feedback and requirements.

EDUCATION

DePaul University Online
MS in Computer Game Programming *Coursework Completed (Capstone Pending)*
CEPT University India
Master of Business Administration. Information Technology and Project Management *2014*
Gujarat Technological University India
Bachelor of Technology in Information Technology *2012*