TANUJ ARORA

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Current Location: Pune

Professional Summary

Game Developer Architect & Technical Architect with 12+ years of expertise in game development, AR/VR/MR, multiplayer systems, and AI-driven experiences. Specialised in scalable architectures, real-time rendering, and networked gameplay solutions for PC, console, mobile, and XR platforms. Proficient in Unity, Unreal Engine, C#, and Generative AI, with a strong track record of leading teams, optimising performance, and delivering immersive gaming experiences.

Technical Expertise

Game Development & Architecture
- Game Engines: Unity 3D (C#, UnityScript, JavaScript), Unreal Engine (Beginner in Unreal 5), Physics Systems, Gameplay Mechanics
- Architecture & Design: Architecture Patterns, Design Patterns
- Rendering & Optimisation: High Definition Render Pipeline (HDRP), Universal Render Pipeline (URP)
- Multiplayer Development: Multiplayer Game Development, Plugin Development, Simulations, Photon Fusion and Quantum

Immersive Technologies (AR/VR/MR/XR)
- XR Development: HTC Vive, Oculus Rift, Apple Vision Pro, Microsoft HoloLens, Vive Focus Plus, Oculus Quest 2/3, Magic Leap, Varjo XR
- AR Development: Vuforia, ARCore, ARKit, IBM Watson, OpenCV, MARS
- Digital Twin: Implementing Virtual Representations of Real-World Systems

Generative AI & AI Agents
- AI Model Integration: OpenAI, ChatGPT API, Genexus AI, Perception AI
- AI Agent Creation: NPC Behaviour Modelling, AI-driven Game Logic, RLHF (Reinforcement Learning from Human Feedback)
- Prompt Engineering: Optimising LLM prompts for AI-driven game interactions, Proposal generation using prompts

Platforms & Deployment
- Devices: PC, Mobile (iOS/Android), WebGL, XR Platforms
- Mobile Development: iOS (Swift 6.0, Xcode), Android Studio (Android SDK, NDK)

Backend & Cloud Services
- Backend Technologies: Node.js, Firebase, REST APIs, AWS, GCP
- Game Analytics & Monetisation: Firebase Analytics, Unity Ads, PlayFab

Tools & Version Control
- Development Tools: Visual Studio, Rider, Git
- 3D & UI Tools: Blender(Basic), Maya (Basic), Photoshop, Figma, Probuilder

Project Management & Leadership
- Agile & Scrum Practices
- Technical Mentoring & Code Reviews
- RFPs, Solutioning & Pre-Sales

Professional Experience

Technical Architect - Game Development   Apr 2022 - Present
Globant India Pvt. Ltd.   Pune, IND
- Architected and developed high-performance game systems using Unity 3D, Unreal Engine, and C#, ensuring scalability across PC, console, and mobile platforms.
- Led technical solutioning and pre-sales efforts, working closely with clients, stakeholders, and product teams to define architecture, respond to RFPs, and create compelling proposals.
- Mentored and guided 8 Globers (Globant employees), providing technical training, career development, and project leadership to enhance team expertise.
- Designed and implemented multiplayer architectures, optimising network performance, latency, and server stability using Photon, Mirror, Fusion and Quantum.
- Optimised rendering pipelines (HDRP, URP) and game assets, improving frame rates and memory efficiency by 30%+.
- Integrated AR/VR/MR technologies for immersive gameplay experiences, working with Apple Vision Pro, Oculus Quest 2/3, Hololens, Magic Leap, Holographic Displays like Voxon and Axiom.
- Developed procedural generation and AI-based gameplay mechanics, enhancing game realism and engagement.
- Conducted code reviews, technical mentoring, and team training, fostering a culture of continuous learning.
- Worked on backend integration (Node.js, Firebase, AWS) and analytics to enhance game performance tracking and monetisation strategies.

Associate Systems Architect | AR/VR Specialist   Aug 2019 - Apr 2022
Encora Innovation Labs (Formerly Indecomm Global Services) Pune, IND
- Designed scalable game architectures for AR/VR/MR applications on mobile, PC, and console.
- Led client solutioning, requirement gathering, POCs, and stakeholder presentations.
- Developed AR/VR applications using Unity 3D, Unreal Engine, ARKit, ARCore, Vuforia, OpenXR.
- Built multiplayer solutions with Photon, Mirror, WebSockets for real-time gameplay.
- Managed cross-functional teams, conducting code reviews, task allocation, and project delivery.
- Integrated AI-driven interactions, hand tracking, and spatial computing into AR/VR experiences.
- Optimised rendering (HDRP, URP), reducing latency by 25% and improving frame rates.
- Conducted technical training and mentorship on game development, XR, and performance optimisation.

Senior AR/VR Game Developer   May 2019 - Aug 2019
Kompanions Pvt. Ltd.   Mohali, IND
- Reviewed and provided feedback on existing AR/VR products to enhance user experience.
- Developed VR solutions, implementing proof-of-concepts (POCs) for innovative applications.
- Worked on 4 VR and 2 AR projects, optimising performance and interactivity.
- Led team management, allocating tasks to ensure on-time project delivery.

Game Producer   May 2017 - May 2019
Ommzi Solutions Pvt. Ltd.   Mohali, IND
- Led teams and managed technical aspects of game development across multiple projects.
- Provided cost estimations and feasibility analysis for all business queries.
- Interacted directly with clients, gathering and defining technical requirements.
- Developed VR projects, ensuring high performance and immersive gameplay.
- Managed team tasks and conducted code reviews for quality assurance.
- Designed and implemented game architecture, ensuring scalability and efficiency.
- Handled end-to-end client interactions, translating needs into technical solutions.
- Oversaw full game development lifecycle, from concept to final delivery.
- Created Game Design and Development documents, ensuring clear project direction.
- Developed wireframes and prototypes for product planning and execution.
- Led QA team, ensuring rigorous end-to-end testing for bug-free deployment.
- Mentored team members, providing technical guidance and support.
- Conducted training sessions for designers and developers on new technologies.
- Worked closely with project managers and assign tasks according to the expertise and requirements

Chief Executive Officer   May 2015 - May 2017
Indiegeeks   Chandigarh, IND

- Founded and led the company, overseeing all business and technical operations.
- Generated business opportunities, driving growth and client acquisition.
- Interacted directly with clients, gathering and defining project requirements.
- Converted requirements into wireframes and mockups, ensuring clear product vision.
- Defined product timelines, ensuring efficient cash flow and resource management.
- Designed technical architecture, ensuring scalability and performance.
- Made key management decisions, executing long-term and short-term strategies.
- Developed business strategies, aligning with market trends and company goals.
- Managed human resources, hiring and mentoring cross-functional teams.
- Oversaw financial and physical resources, optimising budget allocation.

Software Engineer   Jan 2013 - Feb 2015
Click Labs Pvt. Ltd.   Chandigarh, IND

- Developed game mechanics and gameplay systems, ensuring smooth user interaction.
- Programmed core game features, including graphics, sound, UI, and scripts.
- Researched demographics and player behaviour, optimising game design and engagement.
- Debugged and troubleshot game code, ensuring error-free execution.
- Led game testing and QA efforts, ensuring compliance with industry standards.

Portfolio Link

https://www.dropbox.com/s/89oen5mem692mcs/PortfolioTanuj_New.pdf?dl=0

Education

Bachelors in Engineering - Information Technology
University Institute Of Engineering And Technology, Panjab University, Chandigarh