

ABHILASH BADGUJAR

New Delhi, DL 110096 • +919769949940 • abhilashbadgujar9@gmail.com •

LinkedIn: <https://www.linkedin.com/in/abhilash-b-82727bba/> •

WWW: <https://drive.google.com/drive/u/0/folders/18rGqbqYmDYWCweatAZwBY7Q2klkbWbWG>

WEBSITES, PORTFOLIOS, PROFILES

- <https://www.linkedin.com/in/abhilash-b-82727bba/>
- github.com/AbhilashBadgujar

PROFESSIONAL SUMMARY

Senior Gameplay Engineer and Technical Lead with 7+ years of experience developing gameplay, AI, procedural-generation, multiplayer, and editor-tool systems in Unreal Engine 4/5 and Unity. Advanced Unreal Engine C++ expertise spanning Behavior Trees, EQS, AI Perception, server-authoritative networking, client-side prediction, procedural generation, character systems, and editor automation. Led a five-person engineering team across four concurrent projects and contributed to PC, VR, mobile, and a commercially released PlayStation title.

WORK HISTORY

Senior Game Programmer & Team Lead

Team of Keys - Noida, India

05/2022 - Current

- Directed a five-person engineering team across four concurrent Unreal Engine and Unity projects, ensuring effective architecture, task planning, code reviews, mentoring, and delivery quality.
- Engineered Unreal Engine C++ editor tools to streamline directory creation, map setup, and runtime virtual texture configuration.
- Engineered a procedural biome system to support 5-10 million vegetation instances per course while ensuring 60 fps performance on target hardware through advanced instancing culling and LOD optimization.
- Streamlined automated golf-course generation, reducing time from 60 minutes to 5-10 minutes per course.
- Built and Optimized server-authoritative multiplayer systems supporting up to 16 players, including RPCs, hit validation, ability synchronization, and client-side prediction.
- Reduced loading time by approximately 40% through asset, scene, and runtime performance optimization.
- Collaborate with gameplay designers, artists, backend engineers, and stakeholders to translate product requirements into scalable gameplay and tooling systems.
- Led development of game systems using C++ and Unreal Engine, enhancing performance and user experience.

Senior Game Developer

EWAR Games - Bangalore, India

04/2021 - 04/2022

- Developed and maintained five multiplayer mobile games-Knife Hit, Sheep Fight, Ludo, Snakes and Ladders, and 2048-using Unity.
- Integrated Kafka, GraphQL, and WebSocket-based backend services into a Flutter application containing embedded Unity gameplay.
- Optimized communication and performance between Unity and Flutter components across real-time multiplayer game flows.
- Led development planning, defined technical workflows, reviewed implementation approaches, and established reusable project architecture.
- Technologies: C++, C#, Java, JavaScript/TypeScript, HTML/CSS, SQL, Python, AWS, Flutter, Dart.

Unreal Engine Game Developer

Hereafter Studios - Mumbai, India

08/2020 - 04/2021

- Developed authentication using AWS Cognito and integrated Agora-based video calling for Unreal Engine applications.
- Built a runtime data-visualization pipeline transferring large datasets from Python into Unreal Engine.
- Developed an Electron-based launcher supporting Windows and VR applications, including version management and updates through AWS S3.
- Created animated UI menus, settings systems, and an Avatar Creation System while coordinating development tasks through Jira.
- Coordinated development tasks, supported architecture planning, and assisted with technical delivery across the engineering team.

Unity Student Ambassador

Unity Technologies - Bangalore, India

11/2017 - 12/2020

- Organized 2 workshops and game jams engaging 60 + students and faculty members and promoting the adoption of Unity tools.
- Supported the allocation of 10+ Unity EDU Grant licenses and educational resources to student groups.
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Unity Game Developer

Dots And Dashes Interactive - Bangalore, India

11/2018 - 07/2020

- Developed multiple 2D and 3D Unity applications across multiplayer, AR, VR, education, and hardware-integrated experiences.
- Integrated real-time multiplayer functionality using SmartFoxServer.
- Built a VR 360-video pipeline and AR product-demonstration applications.
- Integrated Unity applications with hardware prototypes, including an Arduino-powered claw machine.
- Built an Android OCR-based credit-card scanning prototype.

EDUCATION

Master of Science: Game Development (Programming), PlayStation First Partner Programme

Kingston University - Kingston Upon Thames, UK

01/2024

Bachelor of Computer Applications: Games and Mobile Application Development

CMR University - Bangalore

01/2019

LANGUAGES

English (Fluent)

Hindi (Fluent)

PROJECT

- E6 APEX - TruGolf, <https://trugolf.com/pages/e6-by-trugolf>, Architected an automated UE5 course-creation pipeline designed to generate approximately 15,000 unique golf courses from heightmap and geospatial data, procedurally spawning pathways, water bodies, boundaries, and custom foliage., Built a Cesium and Unreal Engine pipeline to crop, stitch, and stream large geospatial datasets onto custom landscapes, working around dataset-size and landscape-import constraints., Created a C++ Course Setup Tool that automated directory creation, Runtime Virtual Textures, Material Instance cloning, and Grass Type template assignments, reducing repetitive level setup., Engineered top-down rendering and batch snapshot tools using GetViewFrustumBounds() and spline intersections to generate high-precision alpha masks and course maps.
- Sawyer 2.0 - Unakin.ai, <https://www.unakin.ai/>, Architected an AI-powered coding and development assistant embedded in the Unity Editor using C#, Python, and FastAPI., Built a UI Toolkit frontend with dockable Editor windows, custom diff views, and RAG indexing services for project-aware LLM interactions., Developed a Python MCP server and C# command registry enabling semantic search, script management, Figma-to-Unity UI generation, and real-time scene, GameObject, asset, and UI modifications.
- Cradle of Sins - U24 Solutions, https://store.steampowered.com/app/1037380/Cradle_of_Sins/, Developed server-authoritative combat and networked character systems, including ability Synchronisation, server-side hit validation, RPCs, and client-side prediction., Diagnosed and resolved a multiplayer tick-rate regression causing 20-30% frame-rate drops using Unreal Insights.
- SAY A PRAYER - Gold Creek VR, https://store.playstation.com/en-us/product/UP3511-PPSA19113_00-0214201306192011, Implemented progression systems, audiovisual reward triggers, Digital Scripture Card milestones, and trophy-related gameplay functionality for a commercially released PlayStation title.
- Bodycam Tactical FPS - Confidential Client Project, Designed and implemented an NPC AI pipeline using Behaviour Trees, EQS, and AI Perception, supporting patrol, investigation, alert, flanking, reinforcement, and combat behaviours., Built bodycam-style camera and character systems featuring procedural sway, lens distortion, light flares, ADS sway, procedural recoil curves, and replicated chamber states., Implemented procedural mission generation through randomised environment layouts, enemy-placement graphs, and dynamic objective seeding.

GOOGLE DRIVE

drive.google.com/drive/folders/18rGqbqYmDYWCweatAZwBY7Q2klkbWbWG?usp=sharing

AWARDS RECOGNITION

- Best Student Game of the Year nominee, 2018, IGDC
- Best Gameplay, 2017, CMR University Game Jam
- Unity Student Ambassador, 2017-2020, Unity Technologies

SKILLS

- Unreal Engine 4/5
- C++
- Python
- EQS
- Crowd Simulation
- Server-authoritative combat
- CO-OP Synchronization
- Unreal Editor tools

- Unity
- C#
- Behavior Trees
- AI Perception
- UE Replication
- Client-side prediction
- Procedural foliage
- C++ plugins