Davon Allen

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Summary

Senior Gameplay Engineer with 9+ years of experience shipping scalable gameplay systems across Unity and Unreal Engine. Specialized in multiplayer-safe system design, data-driven gameplay frameworks, and live production stability across mobile and cross-platform environments.

Technical Proficiencies

Core Expertise: Gameplay Systems Architecture • Multiplayer-Safe Logic • Deterministic Systems • Player State & Lifecycle Management • Data-Driven Frameworks • UI-Gameplay Integration • Live Service Support
Tech Stack: Unity (C#) • Unreal Engine (C++, Blueprints, Verse) • iOS / Android • Git • Perforce • Plastic SCM

Experience

Senior Gameplay Engineer | 07/2024 - 03/2025
JOGO - Waterford, MI

- Engineered server-authoritative multiplayer systems in UEFN (Verse), stabilizing 16-player sessions across live Fortnite islands with 235M+ and 84M+ lifetime minutes played.
- Led gameplay overhaul of a legacy island (235M+ lifetime minutes, 583K+ favorites), rebuilding it into modular, dynamically composable game modes.
- Contributed to launch-scale arena (84M+ lifetime minutes, 22K+ peak concurrents), designing ability, bounty, and vendor economy systems.
- Eliminated replication desync and round-state instability under live traffic, preserving 22–30 minute average session duration and multi-day retention..

Senior Software Engineer / Gameplay Engineer | 07/2019 - 02/2024
Age of Learning - Glendale, CA

- Designed reusable, data-driven gameplay templates enabling 60+ interactive books to ship in under 9 months, reducing book production time from ~60 minutes to ~5–12 minutes via custom tooling.
- Introduced Unity Addressable system across modular Hub architecture, reducing bundle sizes from ~20 MB to 5–9 MB and stabilizing memory usage on legacy devices (iPad 2).
- Architected cross-device UI scaling system supporting iOS 9+, Android 10+, and Windows 11 without asset duplication.
- Reduced crash rates to ~5% by optimizing asset loading, graphics settings (Metal API), and device-specific memory constraints in nationwide school deployments.

Unity Developer / Gameplay Engineer | 10/2015 - 07/2019
Fast Effect - Royal Oak, MI

- Shipped 20+ AR/VR and multi-display systems deployed at CES and NAIAS, sustaining 12-hour runtimes with near-zero live failures.
- Stabilized marker-based AR tracking for full-scale RAM ProMaster vehicles, eliminating jitters and drift under variable trade show lighting.
- Built 90 FPS VR driving simulator using physics-recorded playback, reducing draw calls by ~50% to meet VR performance standards.
- Standardized reusable Unity frameworks (pooling, batching, video compression), reducing runtime instability across 6+ kiosk deployments.

Projects

Mecha vs Magica | 07/2025
(Unreal Editor for Fortnite | Verse | Multiplayer Systems)

- Delivered fully playable PvPvE multiplayer prototype in 7-day sprint, architecting AI, combat damage, and wave-scaling systems under compressed production constraints.
- Implemented server-authoritative damage validation and multiplayer-safe health tracking.
- Directed 10-person interdisciplinary team to ship stable Unreal-based build within one-week game jam timeline..

Antithesis | 08/2024
(Unity | Systems Design | Tools | Card Game Architecture)

- Architected a deterministic hybrid board/card rules engine supporting 500 unique cards across 5 factions, formalizing recursive response windows and alignment-gated deck construction constraints.
- Designed and deployed a cloud-hosted Unity WebGL deck construction tool with schema-based validation (0 illegal runtime decks), reducing full 500-card iteration time by ~95% via automated CSV to Publisher to JSON pipeline.
- Implemented state validation and effect resolution systems ensuring consistent gameplay transitions.
- Integrated gameplay, UI, and content pipelines into a unified tool-driven workflow.

Education

International Academy of Design and Technology - Troy | Bachelor of Arts
Game and Interactive Media