

ANDREW A. DUNN

SENIOR UNITY ENGINEER | SYSTEMS ARCHITECTURE | GAMEPLAY UI/UX

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PROFESSIONAL SUMMARY

Senior Unity Engineer with 8+ years of experience across edtech and startups building scalable applications reaching 1+ million users. Specializes in performant C# infrastructure as well as developing proprietary tools to empower both clients and team members. Ensures that complex systems like AI driven interactions and custom level editors are both highly immersive and strategically optimized.

AREAS OF EXPERTISE

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|---------------------------|--------------------------------|--------------------------|--------------------------|
| ✓ C# Programming | ✓ Systems Architecture | ✓ Mobile Deployment | ✓ uGUI |
| ✓ Unity (2021 LTS/6) | ✓ Design Patterns | ✓ REST APIs | ✓ HLSL (Shaders) |
| ✓ Assembly Definitions | ✓ Editor Tooling | ✓ Unity Cloud Build | ✓ Draw Call Reduction |
| ✓ Addressables Frameworks | ✓ Scriptable Object Management | ✓ Multiplayer Networking | ✓ Technical Art Pipeline |
| | | | ✓ Rapid Prototyping |

CAREER HIGHLIGHTS

Project Optimization: Overhauled the codebase at Joon utilizing Observer and Singleton Design Patterns to create an instantiation tracking system with Addressables and Event callbacks.

Award Winner: Spearheaded development for [award-winning technology](#) at Hellosaurus, which earned recognition from Fast Company's World Changing Ideas, the Kidscreen Awards, and Apple App Store's "App of the Day."

User Generated Content (UGC) Pipeline: Established a UGC Pipeline at Black Rocket that is still in place today, which allows students to transfer custom maps, tracks, and skins to live playable builds.

PROFESSIONAL EXPERIENCE

Senior Unity Engineer | Joon App, Inc. | Remote | January 2023 – April 2026

Managed the full technical lifecycle of a gamified habit building platform, evolving from a mentor for junior talent to the primary engineer responsible for a project serving 1+ million families.

- Introduced Addressables and Assembly Definitions to a legacy project, which stabilized the build pipeline and drastically reduced iteration times for the development team.
- Engineered an AI integrated Pet Interaction system using microphone and text input to deepen user immersion and drive higher retention rates.
- Created a "Backyard" level editor using custom placement and serialization systems that empowered users to build personalized environments as well as showcase their creations.
- Redesigned the UI/UX architecture for the "Quest" system, eliminating performance bottlenecks on low end mobile devices through optimized menu logic using Factory Design Patterns.
- Built specialized Editor Tooling that allowed artists and designers to import assets independently, removing engineering as a bottleneck for content updates.
- Handled global Live Ops deployments to iOS, Android, and Amazon stores while maintaining application stability via Sentry monitoring.

PROFESSIONAL EXPERIENCE (CONTINUED)

Unity Engineer | Hellosaurus | Remote/New York City | July 2021 – October 2022

Collaborated on the development of an interactive video platform for families, eventually assuming technical ownership of the codebase powering a product utilized by 70,000+ users.

- Co-architected a proprietary WebGL Video Gamification Editor (Creator Studio) that enabled external content creators to easily build their own interactive media.
- Developed a foundational Generics Controller System for the Creator Studio settings menu, which became the architectural standard for all future “Do It” activity modules.
- Assumed technical leadership after a team transition, working with stakeholders to translate product visions into executable roadmaps and sprint goals.
- Programmed C# bridge methods to facilitate communication between Unity and native iOS/Android containers for seamless cross platform functionality.
- Modernized the data serialization pipeline using Newtonsoft JSON and ScriptableObjects to ensure efficient syncing of complex activity configurations.
- Integrated Unity Remote Config to push logic adjustments over the air, bypassing lengthy app store approval cycles.

Game Developer & Curriculum Architect | Black Rocket | Freehold, NJ | May 2017 – July 2021

Developed flagship Unity Project Templates and "Esports" titles enjoyed by 20,000+ students annually while engineering the core technical frameworks for an international edtech platform.

- Constructed a custom World Generation system for a 3D Battle Royale using randomized seeds and editor scripted modules to create varied gameplay environments.
- Implemented multiplayer networking via Photon to synchronize real time player placement, leaderboards, and spellcasting events across different platforms.
- Produced unique project Editor Windows for track creation and asset management, enabling students and staff alike to build levels without touching core code.
- Crafted technical art solutions such as custom HLSL shaders for a color draining resource system while optimizing 3D assets and UV mapping to maintain high frame rates on standard school hardware.
- Led technical training initiatives, authoring comprehensive curriculum and mentoring a national network of instructors on Unity best practices, C# scripting, and VR development.

EDUCATION

Quinnipiac University | Bachelor of Arts: Game Design & Development (*Summa Cum Laude*)