

Matthew Hansen

Game Programmer

<https://mhansen.dev>

Summary

Software developer with 8+ years of experience delivering robust and optimized systems in Unreal Engine and Unity for PC, console, and mobile. Specialized in performance optimization, API integration, and feature implementation. Skilled at collaborating across technical and creative disciplines.

Education

Florida Interactive Entertainment Academy (FIEA/UCF) M.S. in Interactive Entertainment	Dec 2016
University of Central Florida B.S. in Computer Science	Jul 2015

Skills

Programming Languages:	C#, C++
Game Engines:	Unity, Unreal Engine (UE4/UE5), Custom
Platforms:	Windows, Android, iOS, Xbox, PlayStation
Tools:	Unity UI, Git, Perforce, Visual Studio, Blender
Specialties:	Game Development, Optimization, AssetBundle/Content Pipeline

Professional Experience

Georgia Tech Research Institute Research Engineer II	Sep 2019 – Feb 2023
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Contract via Apex Systems (Software Engineer), Sep 2019 – Mar 2021; Full-time, Mar 2021 – Feb 2023

- Directed the design and implementation of a 3D aircraft maintenance training program built in Unity and C# with a cross-functional team of 4-6 members, accelerating maintenance for a fleet of 30 aircraft nationwide
- Developed interactive gameplay props using OpenVR, featuring component installation/removal and cable management
- Implemented a state-driven architecture for interactive objects within the maintenance task system, enabling undo/redo capabilities and modular testing of gameplay components
- Drove code quality and performance for live-service gameplay by conducting code reviews and managing pull requests using Git and Bitbucket, ensuring 90+ FPS and product stability
- Strategically defined and executed multi-year development roadmaps with directors, driving incremental feature updates and ensuring consistent annual contract funding
- Implemented a visual guidance system with object and path highlighting, increasing training completion rates by 60%
- Added 2D map navigation functionality to an F-16 Center Display Unit by using FliteScene and DirectX APIs

Various Clients Freelance Unity Developer & Consultant	Aug 2016 – Jul 2019
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Selected Projects:

Speedleague | Freelance AI Programmer

- Implemented NPC vehicle behaviors using C# in Unity for a mobile racing game in collaboration with Jackpot Rising
- Developed steering, sensor, and waypoint systems to simulate racing logic for single-player competition
- Project was partnered with ESPN, X-Games motorsports, and the creator of Red Bull's Global Rallycross Championship

Dream Compass | Freelance Programmer

- Built core gameplay systems for a 2D adventure/strategy/platformer hybrid in Unity
- Implemented enemy behavior, puzzle logic, and physics-based player movement mechanics
- Project was showcased at SIEGECon in Atlanta, highlighting indie innovation in genre blending

Tommy the Turtle: Color Splash | Freelance Programmer/Designer

- Solo programmer for an educational game in Unity for K–5 children on the autism spectrum, emphasizing accessible UI and sensory-friendly gameplay
- Designed gameplay interactions to support visual, auditory, and tactile feedback tailored to neurodiverse players
- Project became the foundation of *Abilities Workshop*, a nonprofit supporting families post-diagnosis

Xaviant | Junior Programmer**Oct 2017 – May 2018**

- Built an end-to-end multiplayer vehicle gameplay system for a 3rd-person shooter in UE4 (C++/Blueprint), encompassing camera, physics, audio, and networking (RPC and replication), supporting up to 25 concurrent vehicles
- Integrated a proximity VoIP system with Steam, Sony PlayStation, and Microsoft Xbox APIs, ensuring certification standards were met and enabling in-game voice communication
- Optimized 100 player matches by profiling gameplay and systems using PIX, improving client performance on the Xbox One by 40% and reducing server bandwidth by 20%

Floyd County Productions | Unity Developer**Jan 2017 – Jun 2017**

- Launched and maintained *Archer, P.I.*, an award winning FX Networks game in Unity for a mobile tie-in to the animated TV series *Archer*, delivering weekly content updates and bug fixes for 250,000+ users on iOS/Android
- Developed gameplay features for AR-based content and 2D point-and-click adventure puzzles in C#
- Engineered scalable UI building blocks using Unity UI, including reusable menus, modals, and buttons
- Implemented the complete achievement system, spanning event-driven backend logic and frontend UI
- Optimized asset storage and app size, including delta updates via Unity AssetBundles and compression techniques

General Dynamics Mission Systems | Modeling & Simulation Software Engineer (Co-op)**Oct 2013 – Jul 2015**

- Developed customizable tools for creating LMS websites, serving the training needs of three U.S. military branches
- Automated end-to-end testing of 2D map-based training modules, reducing manual testing time by 80%

Capstone Project

The Channeler | Programmer

- Developed core gameplay and input systems in UE4 using the Tobii EyeX for an eye-tracking action-puzzle game, successfully published on the Tobii Gaming Store
- Led gameplay testing sessions by gathering player feedback and eye-tracking data, helping the team iterate on interaction design and refine the user experience
- Exhibited the game at GDC 2017 in San Francisco, where it was honored with the Intel University Games Showcase Innovation Award, earning a \$7,500 donation to FIEA/UCF