Matthew Hansen
Software Engineer

mhansen.dev | mhansendev@gmail.com | United States

Summary

Experienced Software Engineer with 10+ years of software development, specializing in 3D game development and real-time systems. Proven track record of delivering high-performance applications, including shipped titles and live service features. Expertise in C#, C++, Unity, and Unreal Engine.

Skills

Languages: C#, C++, C, Python, Java, Blueprint, SQL, HTML, CSS, JavaScript
Technologies: Unity, Unreal Engine, Godot, Git, Perforce, OpenGL, PIX, NUnit, Docker
Platforms: Windows, Linux, OSX, Android, iOS, Xbox, PlayStation

Work Experience

Georgia Tech Research Institute & Apex Systems, Lead Software Engineer   Sep 2019 – Feb 2023
- Managed a multi-disciplinary team of 4+ engineers, artists, and designers to develop real-time virtual reality applications for aircraft training and maintenance programs in C# and Unity
- Simulated an F-16 Center Display Unit using WPF and C# to analyze area navigation performance
- Maintained development roadmaps with directors, ensuring incremental multi-year delivery
- Streamlined processes to improve software reliability across development and production releases

Self Employed, *Software Engineer & Consultant*   *2016 – 2019*
- Automated the workflow between motion capture, Maya, and Unity, reducing asset creation time
- Implemented real-time vehicle AI locomotion in C#, enabling responsive behavior in circuit racing
- Collaborated with educators to design and develop interactive iOS and Android learning experiences, addressing unique sensory and communication challenges for children on the autism spectrum

Xaviant, LLC, *Software Engineer*   *2017 – 2018*
- Developed and optimized core gameplay systems in C++ using Unreal Engine 4 for a third-person shooter on PC, Xbox One, and PlayStation 4
- Prototyped and polished networked vehicle system in collaboration with the design and art team
- Profiled and optimized gameplay and engine level code on PC and Xbox One using PIX
- Engineered a cross-platform VoIP system, utilizing Steam, PSN, and XBL SDKs, demonstrating proficiency in network programming and API integration

Floyd County Productions, *Unity Developer*   *2017 – 2017*
- Developed augmented reality driven gameplay puzzles for the FXX series "Archer" using C# and Unity
- Architected the achievement system's backend logic, implemented specific achievements, and designed and constructed the supporting user interface
- Implemented asset optimization strategies, including storage reduction, bandwidth compression, and obfuscation techniques, for seamless continuous delivery to mobile devices

Florida Interactive Entertainment Academy, *Programmer*   *2015 – 2016*
- Launched an innovative eye-tracking game utilizing Unreal Engine, C++, and Blueprint
- Engineered Python-based data analysis tools to gather and interpret user interaction metrics from eye-tracking hardware, directly influencing design decisions for improved user experience

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

Education

Florida Interactive Entertainment Academy, M.S. in Interactive Entertainment   2015 – 2016
University of Central Florida, B.S. in Computer Science   2012 – 2015