

Mathew Tomberlin

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Software Engineer and AR/VR Game Developer with 8+ years of experience delivering high-impact immersive gaming experiences. Proven track record of developing award-winning VR projects, such as a haptic VR game honored with Best in Show at AWE 2024. Demonstrates technical leadership in game optimization, hardware integration, and innovative input methods, driving performance improvements and user engagement. Former US Marine Corps linguist with a disciplined, results-driven problem-solving.

Skills

Skill Category	Software & Technology
Game Engines	Unity, Unreal Engine
Software Engineering	C#, C++, Javascript, React, Java, Python
Graphics Programming	Unreal Blueprints, HLSL Shaders, OpenGL
System Design	Full-stack SaaS design, gameplay system design, reactive UI design
Optimization	Profiling, Debugging, Performance Tuning
Hardware Expertise	Oculus, Vive, Index, Haptics Integration
Optimization	Profiling, Debugging, Performance Tuning
3D Art	3D Modeling, Skeletal Rigging, and Animation

Professional Experience

VR Software Engineer | HaptX Inc | Mar 2022 – Oct 2024

- Delivered Award-Winning Product: Designed immersive gameplay systems and physically-enabled haptic interactions, leading to a Best in Show award at AWE 2024 and driving a surge in G1 haptic glove sales.
- Boosted User Experience: Optimized Unreal Engine 4 VR applications, improving framerate and reducing VR sickness, resulting in a 40% reduction in user-reported discomfort.
- Streamlined Production: Built a glove testing application that resolved recurring hardware issues, reducing RMA requests by 50%.
- Secured Investment: Repaired alpha haptic gloves, enabling seamless demos leading to a \$12M funding round from AIS investors.
- Thought Leadership: Conducted 100+ VR demos to investors and ITSEC 2023 attendees, leading to increased product adoption.

Full-Stack Software Engineer | Tapestry Solutions | May 2019 – Mar 2022

- Enhanced Real-Time Sensor Tracking: Designed and implemented Apache Kafka-based messaging systems, improving sensor data reliability for Boeing ESI's operations.
- Won Contracts Through Innovation: Contributed to system design and developed the ICODES Load Planner app front-end using Javascript and React and back-end using Java and SQL, directly enabling new government contracts.

VR Game Developer (Researcher) | California State University Monterey Bay | Jan 2017 – Mar 2018

- Published VR Research: Developed Scalebridge, a Unity-based VR game incorporating EEG inputs; presented at VS-Games 2019.
PDF: <https://mathewtomberlin.github.io/Gauntlet.pdf>
- Pioneered Input Methods: Created Gauntlet, an innovative VR input technique for hand tracking, published at IEEE VR 2017.
PDF: <https://mathewtomberlin.github.io/Scalebridge.pdf>

Signals Intelligence Operator | United States Marine Corps | Oct 2007 – Jun 2012

- Mission-Critical Operations: Operated digital signals intelligence equipment in collaboration with the FBI and special operations teams, ensuring the success of high-stakes missions.

Personal Projects

CG Engine

- Developed an open-source, OpenGL, C++ graphical scripting engine developed for community use
GitHub: <https://github.com/MathewTomberlin/CGEngine>

Block Breakout

- Developed a UE4 C++ game showcasing advanced shader programming and materials, open-sourced for community use.
GitHub: <https://github.com/MathewTomberlin/Breakout>

Open Ocean VR

- Built Unity tools for designing underwater VR experiences without requiring coding expertise, enhancing creative flexibility.
Demo: <https://gamejolt.com/games/OpenOcean/383524>

Education

- Bachelor of Science in Computer Science, Game Programming Concentration
California State University, Monterey Bay | 2016 – 2018