Mathew Tomberlin

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Portfolio: mathewtomberlin.github.io | **LinkedIn: linkedin.com/in/mathew-tomberlin** | **GitHub: github.com/MathewTomberlin**

Versatile Software Engineer with 8+ years of experience building high-impact applications across AI, VR, game development, and full-stack SaaS. Keen project management and communication skills honed in military and start-up environments. Quick to align with and prioritize key project requirements and milestones. Passion for mentoring junior developers and learning new technology.

Skills	
Enterprise App	React, Typescript, Javascript, Java, Spring, REST API, SQL
Game Programming	Unreal Engine, C++, Blueprints, Unity, C#, Animation Programming, Level Design, Performance Optimization, AI Character Design, Networking and Multiplayer
3D Art	Blender, 3D Modeling, Character Rigging and Animation, Materials and Textures
AI Applications	LLMs, Agents, LangChain, ComfyUI, SwarmUI, RAG

Professional Experience

VR Software Engineer | HaptX Inc | 2022 – 2024
- Worked with hardware and firmware engineers to build VR training in Unreal Engine for haptic VR gloves.
- Built C++ software to validate glove assembly in production and reduce mistakes by over 50%.
- Released Unreal Engine VR training that won Best of Show at AWE 2024 and was praised by customers.
- Optimized the VR demo and doubled the framerate, leading to significantly improved user comfort and satisfaction.

Full-Stack Software Engineer | Boeing Tapestry Solutions | 2019 – 2022
- Modernized the ICODES web app front-end using React and Typescript and the back-end using a Java Spring REST API.
- Was a founding engineer at Boeing ESI SaaS and built the Kafka back-end for warehouse automation.
- Directly contributed in the software and UI design processes of both ICODES and ESI projects.
- Mentored both peers and junior developers and frequently advocated for best coding practices and tooling.

VR Game Developer | CSUMB Researcher | 2017 – 2018
- Built Scalebridge, an educational Unity C# game using EEG for ADHD therapy and presented at VS-Games 2019
  PDF: https://mathewtomberlin.github.io/Gauntlet.pdf
- Designed and developed Gauntlet, a VR input method for optical hand tracking; Published at IEEE VR 2017.
  PDF: https://mathewtomberlin.github.io/Scalebridge.pdf

Signals Intelligence Operator | United States Marine Corps | 2007 – 2012
- Graduated from the Defense Language Institute with a fluency in Korean
- Mentored junior Marines and lead a fire team of Marines
- Deployed with spec ops teams operating electronic signals intelligence equipment in treacherous environments.

Personal Projects

CG Engine | Open-Source C++ Scripting Engine
- An OpenGL C++ scripting engine open-sourced for community use
  GitHub: https://github.com/MathewTomberlin/CGEngine

React Agent AI | Open-Source React and Python Agentic Image Generation
- A React front-end, Model Context Protocol (MCP)-capable Agent AI capable of generating images locally on PC
  GitHub: https://github.com/MathewTomberlin/React_Agentic_AI

Education

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