QUINN AHO

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EDUCATION

Wayne State University **Detroit, MI**

B.S. in Computer Science Engineering *Aug 2022 – May 2026*

- GPA: Major 3.86, Cumulative 3.2
- Coursework: Computer Graphics, Game Programming, Software Engineering, Linear Algebra

Honors: Congressional App Challenge Winner • Dean's List • Edward + Bernard Gaffney Scholar

WORK EXPERIENCE

Johns Hopkins Applied Physics Lab **Laurel, MD**

Software Engineering Intern - Immersive Technologies and Software Solutions: *May 2024 – Present*

- Developed **Unity training simulations** (long-term project) and built **Unreal Engine prototypes** to validate new features, securing multi-year program funding.
- Built a **node-based authoring tool (IMI System)** to let non-programmers create lesson/mission logic.
- Engineered **automation pipelines** (CI/CD, PowerShell, NSIS, virtualization, networking) to streamline builds.
- Contributed to **technical art**: shaders, batching, and lighting optimization.

Corvid Technologies **Mooresville, NC**

VR Visualization Intern: *May 2023– Aug 2023*

- Built VR development tools and **IK-based avatar systems** in Unreal (C++/Blueprints).
- Produced a **cinematic demo** for Raytheon, integrating CAD/Blender assets with custom shaders and VFX
- Improved debugging and profiling workflows for real-time VR applications.

GS Engineering - Multiple Roles **Houghton, MI**

Simulation Engineering Intern: *Nov 2023– May 2024*

- Designed an **Unreal Engine plugin** for KPI tracking in digital twin vehicle simulations.
- Focused on collisions, physics tuning, and gameplay logic for realistic environments.

Technology Growth Intern (Highschool): *May 2021– Aug 2022*

- Researched and prototyped VR training applications in Unreal Engine.
- Established **CAD-to-engine pipelines** for simulation and training use.

PROJECTS

Realistic AI Avatar Animation System

Freelance Contract (Junior Developer) *Sep 2024– Nov 2024*

- Integrated **Nvidia Audio2Face + Eleven Labs** into Unreal for real-time AI-driven avatars.
- Built optimized **animation state machines** and procedural systems for seamless AI interaction.

OpenGL AI Viewer – C++ Renderer & Raytracer

University Project - Computer Graphics *Feb 2024 – April 2024*

- Built a **cross-platform 3D viewer** with real-time PBR rendering and a BVH-accelerated CPU raytracer.
- Designed a **JSON Ops API + React/Tailwind UI** for interactive scene editing and automation workflows.
- Prototyped **AI-driven controls**, translating natural language into JSON Ops for dynamic scene updates.

VR Diving Simulation *Oct 2024*

XR Midwest Hackathon - Contestant

- Developed a VR trainer with **hand tracking, timing logic, and real-time feedback**.
- Collaborated under hackathon constraints to deliver a working immersive prototype.

UE5 Cinematic – "The Golem's Curse" *Dec 2024 – Jan 2025*

Personal Project

- Directed **lighting, VFX, cinematography, and animation** in Unreal Engine 5.
- Produced a full-length cinematic with professional-quality visuals and sound design.

SKILLS

***Programming*:** *C++, C#, Python*
***Engines & Frameworks*:** *Unity, Unreal Engine 4/5 (C++/Blueprints)*
***Graphics*:** *OpenGL, DirectX, Shader Development (GLSL/HLSL), Rendering Pipelines*
***Pipelines & Tools*:** *CI/CD, Git, Perforce, PowerShell, NSIS, Testing/Debugging*
VR/AR Development *– Interaction systems, motion tracking, procedural animation, multiplayer*
***Specialties*:** *Gameplay Systems, VR/AR Development, Simulation, Tools & Plugins, Technical Art*
DCC Tools *– Blender, SolidWorks, NX*