

Education

Oregon State University

Bachelor of Computer Science

GPA: 3.07 | Class of 2024

Experience

SIGGRAPH Student Volunteer

2024; invited to return for 2025

- Collaborated with teams to ensure the smooth operation of ACM SIGGRAPH 2024.
- Facilitated immersive VR experiences in the VR Theater, including guiding guests and assisting with VR headset usage.
- Enforced conference policies such as "No Photography" and monitored attendee compliance.
- Assisted with attendee management tasks, including checking badges and providing directional support.

Undergraduate research assistant

June 2024 - August 2024

Developed an AR construction visualization software for the Magic Leap 2 using Unity's OpenXR library.

- Implemented marker tracking and plane detection with Magic Leap's features, enhancing model placement accuracy.
- Collaborated with a professor to integrate 3D models with ArUco codes, resulting in improved visualization and user customizability.

Relevant Coursework

Intro to Computer Graphics, Grade: A

Computer Graphics Shaders, Grade: A

Virtual / Augmented reality, Grade: A

Cloud App Development, Grade: A

Technical Skills

- C/C#/C++
- Python
- Javascript
- Raytracing
- OpenGL
- Unreal Engine
- Software Development
- Game Programming

Projects

BallQuest AR (Senior Capstone) | [View Project](#)

Quest 3 Headset, Unreal Engine

- Contributed to the design and development of an immersive AR maze game.
- Leveraged the passthrough feature of the Quest 3 for enhanced user experience.
- Implemented real-world physics for interactive gameplay, allowing users to manipulate virtual balls using a physical box.

Realistic Flight Simulator | [View Project](#)

Unreal Engine, Cesium, JSBSim

- Built a real-time aircraft flight simulator in Unreal Engine 5, integrating the JSBSim plugin for advanced flight physics
- animated a rigged aircraft model, mapping player input to both visual animations and the JSBSim flight dynamics model for responsive, physically accurate gameplay
- Leveraged Cesium's 3D geospatial streaming to provide a high-fidelity open-world flight experience grounded in real-world topography

Realistic Wave Simulation | [View Project](#)

OpenGL, GLSL

- Developed a dynamic wave simulation using Gerstner waves.
- Incorporated real-time user interaction to control wave parameters, enhancing visual realism.
- Implemented vertex and fragment shaders to accurately model wave motion.