

# Andrew Hoult

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<https://andrehoul.github.io>

## SKILLS

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**Programming & Engines:** C, C++, C#, Unreal Engine 5, Unity, Vulkan, DirectX 12, OpenGL, WebGL, TypeScript/JavaScript, Node.js, assembly

**Specializations:** Gameplay programming, rendering pipelines, engine development, physics simulation, networking, multiplayer systems, tools development

**Additional:** HTML/CSS, ASP.NET, software engineering, SDLC, debugging, performance optimization

**Soft Skills:** Communication, problem solving, independent learning, collaboration

## INDEPENDENT PROJECTS

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[Raytraced voxel renderer](#) (C++, Vulkan), 2024

C++ raytraced voxel renderer in Vulkan created with no/minimal external libraries. Optimized renderer to 300+ fps with a 2048x2048x512 grid. Supports reflections and refractions.

[Pixel platformer engine](#) (C++, D3D12), 2024

C++ pixel platformer in DirectX 12 created with no/minimal external libraries.

[Web-based game engine and map editor](#) (Typescript, WebGL), 2023

Multiplayer FPS engine and map editor made with WebGL and Typescript. Server client architecture with the server running in Node.js.

[Convex rigidbody physics engine](#) (C++, OpenGL), 2022

C++ rigidbody physics engine in OpenGL. Made with GLFW, GLM, and GLEW.

## TEAM PROJECTS

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[Chime](#), 2025 - 2026

3D platformer created with Unreal Engine 5. I handled gameplay and level programming, created gear systems and puzzle mechanics.

[Shadows Beneath the Dust](#), 2024 - 2025

Multiplayer fps co-op game created in Unity. I handled networking, rendering, procedural generation, and some gameplay programming.

[Beat 'em Up](#), 2024

2D genre bash of beat-em-ups and rhythm games. I programmed movement, AI, level design tools, music integration, and composed music.

[Game Jams](#), 2022 - 2025

Developed many small games in group settings. More info on portfolio.

## EXPERIENCE

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Game Host

Looking Glass Adventures

- Hosted Escape Room games, remotely controlling games to maximize guest experience.
- Troubleshooting and fixed electronic components.
- Implemented an online learning management system for employee training.

April 2022 - Present

Toronto, Ontario

Prototype Developer (Contract)

Full Circle CS

- Developed prototypes of interactive art concepts for potential commercial use.
- Developed a web server with ASP.NET that allowed users to create accounts, customize avatars, and interact with social features. Web server connected to a Unity client to allow users to participate in interactive social experiences.

April 2025 - September 2025

Oshawa, Ontario

Peer Educator  
Ontario Tech University

September 2024 - April 2025  
Oshawa, Ontario

- Tutored fellow students in math and programming.
- Taught study habits, time management skills, and learning strategies through online workshops.

EDUCATION

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**Ontario Tech University**, Oshawa, Ontario  
*Honours Bachelor of Information Technology*  
*Game Development and Interactive Media*  
2023 - 2027 (Graduation date)

**Sheridan College**, Oakville, Ontario  
*Honours Bachelor of Game Design*  
2022 - 2023 (Transferred)

ACHIEVEMENTS

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**Best First Year Game - 2023**  
*Ontario Tech University*

**Guest’s Choice - 2023**  
*Ontario Tech University*

**Best Second Year Game - 2024**  
*Ontario Tech University*