

Maxwell Robertson

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Portfolio: maxwellrobertson.github.io | St. Albans, AL3

Computer Graphics & Games Engineer

Motivated Computer Science undergraduate specialising in high-performance graphics and games engineering. Experienced with C++, OpenGL, Visual Studio, and GitHub. Passionate about building creative and efficient real-time applications. Seeking opportunities to contribute technical expertise and a strong work ethic to the graphics or game development industry.

Key Skills

- **Programming:** C++, C, Python, JavaScript
- **Graphics:** Vulkan, OpenGL, GLSL, Real-Time Rendering, PBR
- **Games:** Networking, Physics, Entity Component Systems (ECS)
- **Tools:** Visual Studio, Git/GitHub, OpenMP
- **Web:** HTML, CSS, Full-Stack Development
- **Software Engineering:** Agile, Scrum, Gantt, Kanban, CI/CD, System Architecture
- **Environments:** Windows, Linux

Experience

Projects:

Heatstroke Engine 2025

Custom C++ game engine with a personal focus on Multiplayer Client-Server networking and ECS.

Shadow Mapping Techniques 2024

Implemented various shadow mapping methods to address aliasing and acne in real-time graphics.

Mesh Processing and Repair 2024

Created mesh tools for format conversion, manifold checks, genus and hole repair via edge tracing.

Bézier Surface Rendering 2023

Built CPU renderer with custom math, Bezier curves, transforms, and OpenMP acceleration.

Sports Centre Management System 2023

Built Flask/React app for a fictional gym using version control, CI/CD and agile practices.

Earlier Experience

Tutor 2024

Computer Science tutoring for GCSE student

Painter/Decorator Summer 2023

Painting and renovation of 4 bed house and garden

Labourer/Painter

Summers 2021–2022

Building projects including bathroom fitting, window renovation and rendering repairs

Admin assistant

Oct 2018

Work experience at Chips Away car repair company

Volunteering

2018–2019

Beaver Young Leader

Education**University of Leeds**

2021 – 2025

Meng, BSc in Computer Science with High Performance Graphics and Games Engineering

Relevant modules: Real-Time 3D Graphics, Game Engine Development

Verulam School, St Albans

2014 – 2021

A-Levels: Maths (A*), Further Maths (A*), Physics (A*)

GCSEs: 10 subjects including English, Maths, DT, French, and Science