

Profile

I am a multidisciplinary game programmer and developer with a broad skillset and an in-depth knowledge of many areas of game development that you can rely on. Through my career, I have excelled in applying videogame technology to real world education and simulation, and in bringing immersive real world data into the space of games.

With experience working across teams of various sizes, including as Lead Programmer on an award-winning singleplayer indie game, I've written and owned codebases that are responsible for everything from gameplay to cinematics and tools. I'm a self-driven creative and work on personal projects in my free time that experiment with unique rendering approaches, data visualisation and esoteric technologies.

I am currently located in Bristol, willing to stay, relocate or work remotely.

Skills

Languages: C#, C++, C, HLSL, GLSL, Java, JavaScript, LUA, Python, Rust

Tools: Unity Engine, DX11, DX12, OpenGL, Git, Jenkins, Wwise, Shader Graph, VFX Graph, PlayCanvas, Unreal Engine, Godot, Google AppScript...

Specializations: Systems, Rendering, Physics, Engine, Gameplay, Tech Art, Sequencing, Tools, Cinematics, Audio

Work History

Friday Sundae

Jun 2022 - Jan 2026 (4y 7m), On-site, Full-time

Lead Programmer (Indie)

Multidisciplinary programming and development role on the award-winning indie open-world, story-based, musical, renovation game from conception in 2022 to early-access release.

- **There Are No Ghosts At The Grand (2026) | Unity**
 - Programming, design and ownership of most interoperable core game systems
 - Gameplay programming for a wide variety of features, incl. player controller & decoration tools.
 - Development of robust in-house editor tools used by art, development and audio teams.
 - Sequencing of missions, musicals and cutscenes using in-house self-developed graph based tools and Timeline.
 - Optimization and debugging using the full range of Unity / C# profiling tools.
 - Authored shaders incl. compute for custom URP-based rendering pipeline across HLSL (ShaderLab) & Shader Graph, visual effects with Visual Effect Graph
 - Extensive use of Wwise including development of custom optimized Unity integration for music-synced gameplay and cinematic elements
 - Implementation of UI designs and functionality from spec, incl. localization management
 - Setup, management and maintenance of automated Jenkins multibranch build server and pipeline
 - Conducting of code reviews, hiring interviews & technical tests
 - Use of source control, issue tracking and project management tools.

Unity Developer (Client Projects)

- **The Journey (2025) - Zayed National Museum | Unity | AR**
 - Development of AR minigames, including a constellation navigation game which draws data from HYG visible star dataset.
 - Design and implementation of the remote-configured app flow system and dynamic museum pathfinding map system.
- **Deadly Mission Unleashed (2024) - BBC | PlayCanvas**
 - Gameplay programming, 2.5D level design and QA on the platforming game based on the Deadly 60 IP.
- **Internal Unity SDK (2023) - Warner Bros. Discovery | Unity**
 - Assisted with development of user data privacy / localization / settings SDK for all WB mobile kids apps.
- **Bitesize Timeline (Cancelled) - BBC | Unity | AR**
 - Led development from prototype to beta stage on cancelled educational AR / Web history game.
- **Tablet Tours - Parthenon, Sutton Hoo, Roman Empire (2023) - The British Museum & SAMSUNG | Unity | AR**
 - Assisted with development and QA on AR museum tour guide app using MaxstAR, including an object-painting minigame.
- **Boomerang Make and Race 2 (Support) - Warner Bros. Discovery | Unity**

Work History

University of the West of England

Jan 2022 - Jun 2022 (6m), On-site, Part-time

C++ Mentor

- Ran mentoring and support sessions for C++ modules on the Games Technology course.

CodeWest

Dec 2020 - Oct 2021 (11m), Hybrid, Part-time

Junior Unity Developer (Contract)

- **SS Freshspring VR (2021) - SS Freshspring Trust & BMT Group | Unity**
 - Programming and general Unity development on SS Freshspring VR, an interactive documentary and educational experience targeting Quest 2 headsets. Managed 360 VR video content, designed and implemented physical interaction minigames, worked directly with clients and ran on-location demonstrations and sessions.

Hollywood Bowl Group

Sep 2018 - Aug 2019 (1y), On-site, Part-time

Arcade Team Member

- Machine maintenance, repairs, bartending and customer service.

Education

University of the West of England

Sep 2019 - Jun 2022

Games Technology (BSc) - 1st w/Hons.

- **Kojima Wars (2022) - Unity:** Cohort (40 member) multiplayer FPS project. Managed netcode, weapon systems, map design and tools.
- **Spellcasters (2022) - Unity:** Hex-based esoteric programming language as a gameplay mechanic. Dissertation project.
- **Earth Streamer (2022) - Unity:** Infinite streaming of OpenStreetMap data and MapBox tiles without an SDK, procedural buildings.
- **Voxel Level Completeness Tools (2022) - Unity:** Voxel engine with integrated level design tools for dynamic completeness detection.
- **Super Funky Ball (2021) - C++ | DX11:** Monkey Ball clone built using a self-developed DirectX11 engine with a custom physics engine.
- **NetScape (2021) - C++ | OpenGL:** Multiplayer top-down shooter with fully featured tile-based level editor and data-driven weapons.
- **Net Connect 4 (2021) - C++ | OpenGL:** Networked online multiplayer Connect 4 game using kissnet.
- **Super Shmup Maker (2021) - C++ | DX11:** Fully data-driven shoot-em-up game engine built in DirectX11 with a team of 4.
- **Blocky (2020) - Unity | Godot:** Voxel game framework for two game engines. Infinite procedural generation, biomes, voxel interaction.
- 9 Additional Games and Projects

Awards, Activities & Societies

- **TIGA Graduate of the Year: Programmer**
- **Dean's Award for Academic Excellence**
- **Student Representative for three years.**
- **President (prev. Treasurer) of the Video Gaming Society - 800+ members.**

Chancellor's School - A Levels

- **Computer Science (B)**
- **Product Design (B)**
- **Physics (C)**
- **LiBF Certificate in Financial Studies**

The Compton School - GCSEs

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|----------------------------|--------------------------------|
| • Maths (8) | • Biology (B) |
| • English Lang. (7) | • Spanish (A*) |
| • English Lit. (6) | • Graphics (A*) |
| • Physics (A) | • Business Studies (A*) |
| • Chemistry (B) | • Geography (B) |

References and Code Samples

Available on request