

# HARRY HOLLANDS

## Game Engine Programmer

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## EDUCATION

### Bsc (Hons)

Computer Science / 2016 - 2019

University of Nottingham / Nottingham, UK

🎓 1st Class (4.0 GPA Equivalent)

## SKILLS

### Programming Languages

- C++
- C
- Lua
- GLSL
- C#
- Python

### Version Control

- Git
- SVN
- Perforce

### Graphics APIs

- Vulkan
- OpenGL

### Platforms

- Windows
- Linux
- Playstation 4 & 5
- Xbox Series X

### Other Technologies

- CMake
- Doxygen
- Tracy
- GLTF
- JSON
- Dear ImGui
- Unity Engine

## OVERVIEW

I am a qualified C++ programmer with a specialisation in game engines. I have 4+ years of experience in game engine development in industry. I am driven and devoted to my work - working on a game by myself using my own engine in my spare time.



## WORK EXPERIENCE

### Game Engine Programmer / February 2021 - current

#### Frontier Developments / Remote

- Worked on **Cobra**, Frontier's proprietary game engine.
- Delivered stability fixes and memory optimisations for **Cobra's** UI technology, reducing the minimum and average memory usage of **Warhammer: Age of Sigmar - Realms of Ruin** by at least 200 MB.
- Contributed within a team of six to integrate CMake into **Cobra's** build process - removing its older, proprietary build system in the process. Under best conditions, build times were reduced by up to 50% (30 minutes, down from 60).
- Oversaw engine release delivery to **Jurassic World Evolution 2**, collaborating with the game team to minimise developer down-time during the release process.

### Graduate Game Engine Programmer / June 2019 - February 2021

#### Frontier Developments / Cambridge, United Kingdom

- Implemented support to change the language of the game on-the-fly within the **Cobra** engine. This drastically increased the speed at which Localisation QA could test the language strings within **Planet Zoo**, no longer having to wait upwards of a minute to close and restart the game in a different language.
- Contributed to next-gen console support (PlayStation 5 and Xbox Series X) for **Planet Coaster - Console Edition**.
- Maintained a bespoke integration branch of **Jurassic World Evolution 2** throughout its early development to provide the engine team with a real-world project on which to test the newest engine features. Developed an internal tool to manage merges and fast-forward the branch every 30 days.

## PROJECTS

### Topaz Engine / October 2016 - current

#### Sole Developer

- Created a 3D game engine from scratch in C++ to use when creating my own video games. Available on GitHub at <https://github.com/Harrand/Topaz>
- The project is developed to a professional level, complete with continuous integration, rich documentation, and a wiki.

### Red Nightmare / September 2022 - current

#### Sole Developer

- Currently developing a 2D action roguelike game called Red Nightmare, using the **Topaz** engine. Available on GitHub at <https://github.com/Harrand/Red-Nightmare>

For further details on my projects, see <https://harrand.github.io/projects/>.