Contents

About Me

Nathan Hiscock
Video Game Design

This Portfolio outlines the development of a selected range of projects, that I believe best demonstrate me as a game designer.

Games have been a personal passion for many years and I believe video games have incredible potential in bringing people together and providing enjoyable and meaningful entertainment.

I have had the opportunity to study a develop a range of skills, finding particular interest in game environments, characters and visual effects, which I aim to use to create meaningful games and experiences.

Education

2022 – 2025
Video Game Design
BA Hons
University of Winchester

2020 – 2022
Geography
A-Level
Barton Peveril College

2020 – 2022
Business Studies
A-Level
Barton Peveril College

2020 – 2022
Environmental Science
A-Level
Barton Peveril College

Experience

Game Designer – Part Time **2023–2025**
RaRa Games
Winchester, England, United Kingdom

Working as a 3D artist, creating visual effects and shaders in Unity.

Skills

VFX and Shaders
Level Design
Game Environments
3D Modelling
Sculpting
Substance 3D

RSA Project

Project Brief

The RSA student awards offer a platform for students to showcase their creativity and innovation and encourages them to push boundaries and tackle read world problems.

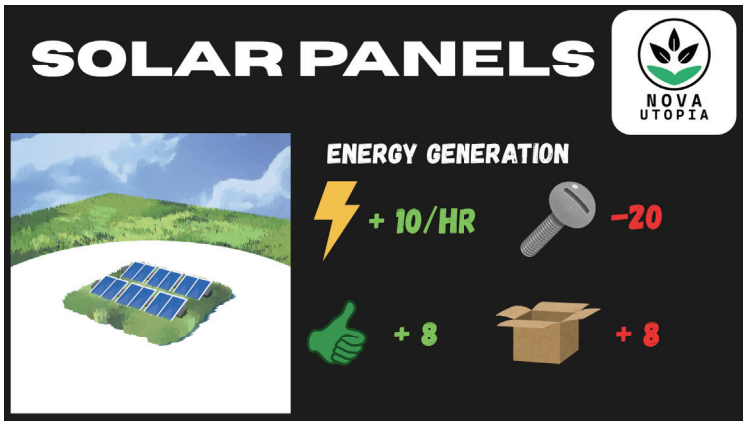
In this project, I was tasked with creating a practical solution, that aligned with one of six yearly RSA briefs, concerning how we could collectively re-imagine a regenerative future for global built environment to enable all life to flourish.

Project Solution

My solution to this brief involves creating a game concept that focused on challenging the players management and problem solving skills, by having them build and manage a city whilst ensuring a sustainable future for the population.

NOVA UTOPIA

Below is a Building Card mock design, including building name, features and stats such as resource and capacity costs, energy rate and civilian satisfaction.



Game Concept

Humans have caused irreversible Damage to Earth and are forced to start a new civilisation on the newly found planet ‘Nova Utopia’.

Nova Utopia consists of six distinct regions, each with their own sustainability challenges, such as low temperatures, lack of sunlight and construction materials.

Avoid the Tipping Point:

Going past the tipping point, by using too many finite resources for example, will result in a game over state.

Each building was modelled on a 1m x 1m to 3m x 3m foundation, as the game would use a grid-based placement system.

Build-able infrastructure is divided into different categories, based on their purpose and benefits or drawbacks.

Each Building has unique benefits and drawbacks, most notably their contribution to the tipping point bar. Players are challenged to manage a variety of more and less sustainable practises to keep the city running below the tipping point.

The next steps for this project involve bringing the concept together to create a working demo, that includes all the necessary gameplay mechanics such as a grid-based placement system, different resource economies and a multiple new building additions to create more challenging scenarios for the player to tackle, especially when managing a city in the vastly different regions of Nova Utopia.

Read more on the project development in my digital portfolio:

Placement Project

Project Brief

This project details my time spent working with a client and how I was able to learn about industry standard practices and explore new skills during the experience.

During this time I learnt how to use Unity's built in shader and VFX graphs, to create a variety of stylised visual effects for the game TomeBound.

Lava Shader and Visual Effects

This effect uses a Voronoi shader with a scrolling noise for a flowing movement and a particle system that randomly repeats an inflating lava bubble.

Scan the QR code to see more.

Portal Shader and Visual Effects

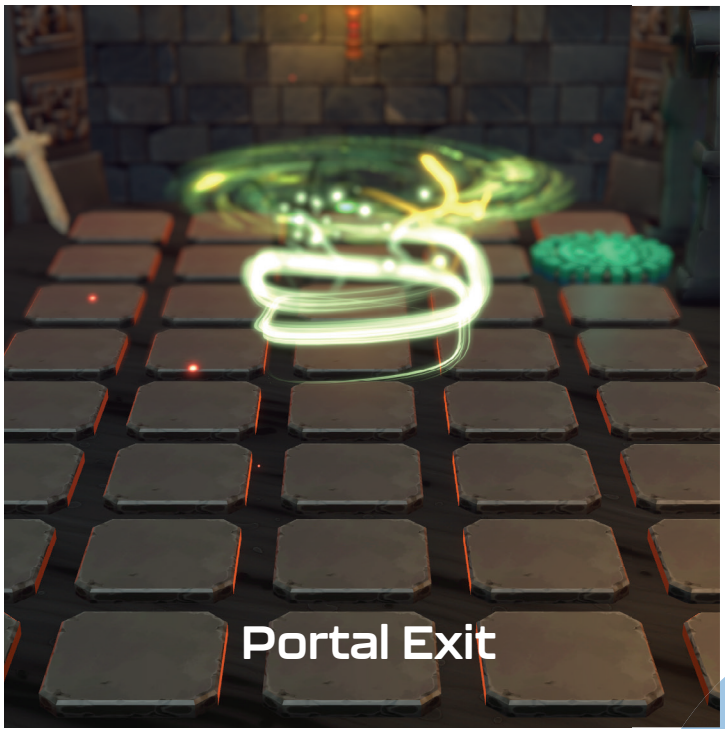
The portal uses a variety of Unity VFX and shader graphs to create each moving part.

The visual effect consists of an entrance and exit portal, bouncy Start-up animations and a shader that reverse dissolves objects as they fall exit the portal.

Scan the QR code to see more.


Dissolving Object


Portal Entrance

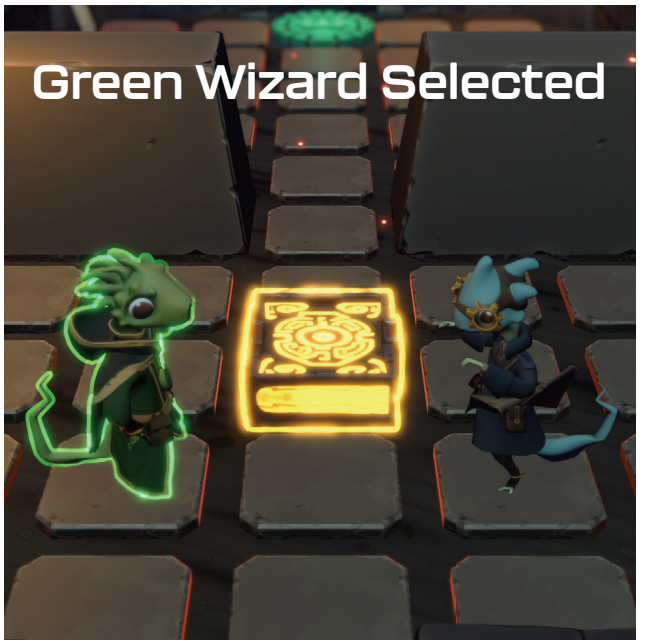

Portal Exit

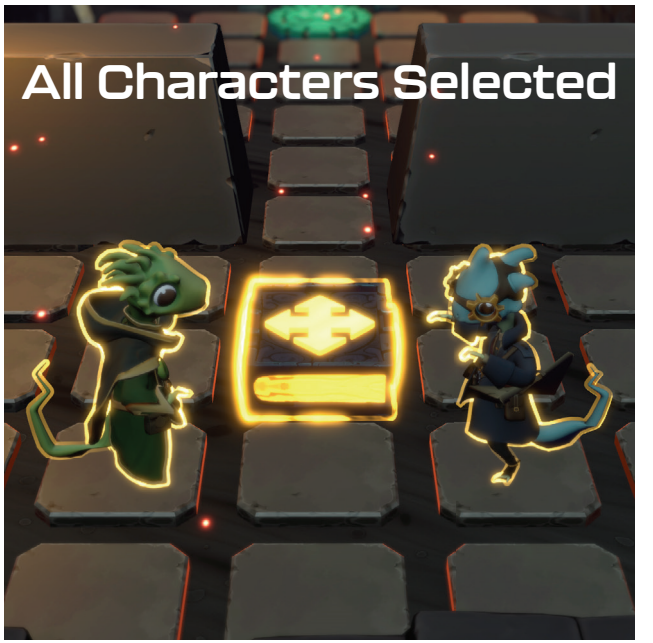
Selected Character Aura Shader

This shader uses Fresnel and different noise and power nodes to create a glowing outline. The outline surrounds the characters silhouette by following a set render rule that ensures the outline always appears behind the character.

The characters have three different states, each of which include different outlines.

Scan the QR code to see more.

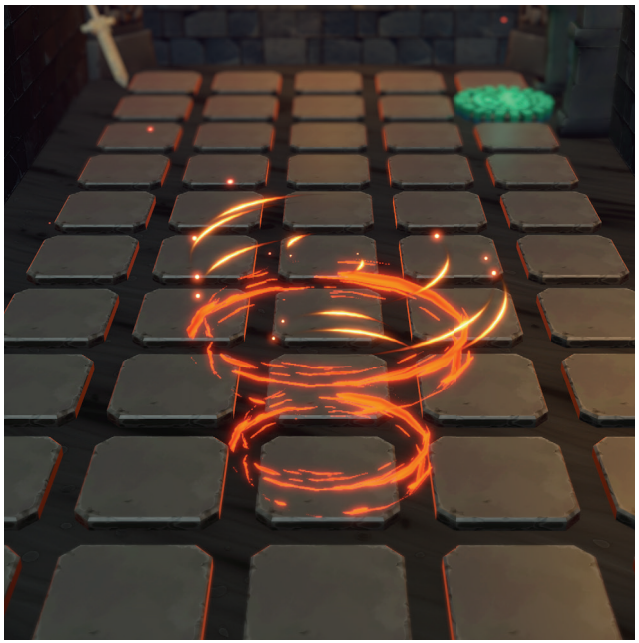




Fire Tornado Visual Effect and Shaders

The fire tornado appears during a start-up animation for an enemy character. It uses multiple VFX graph outputs to create multiple different coloured layers and spiralling movements, with additional firefly particles for a more intense enemy spawning sequence.

Scan the QR code to see more.



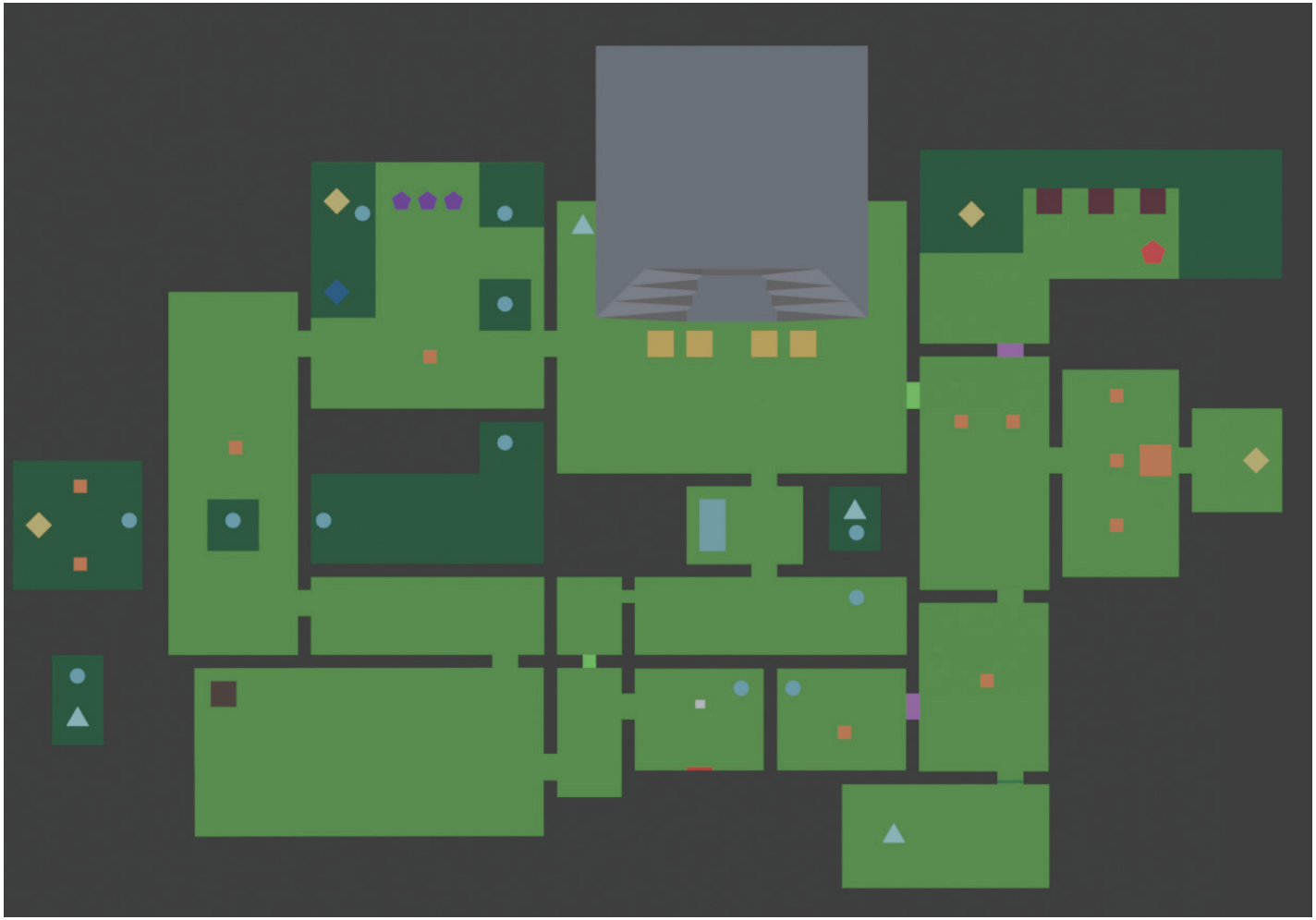
Major Research Project

Project Brief

Following on from a chosen research topic, this project involved creating a practical counterpart that aligned with the primary and secondary research carried out during a case study.

My chosen research topic Explored how video games are made to be engaging with different audience types.
I decided on creating a level in Unity, to fit an action and adventure game that would feature unique puzzles and player mechanics with heavy inspiration from Death's Door.

Early Level Block-out



Ground Level
Higher Level
Level Start
Level Exit
Exit Keys
Enemy
Grapple Ability
Grapple Points
Village
Treasure Chest
Treasure Chest Keys
One-Way Locked Door
Puzzle Locked Door
Jump Mushroom
Moving Platforms

Puzzles

Puzzles would be a large gameplay focus as they are great at encouraging more engagement.

An example involves the player having to match the energy levels across different pillars by moving the energy up and down the pillars levels. However, changing one pillars energy level can have an effect on the others.

Grapple Hook Ability

This level would introduce the player to the grapple ability, allowing them to interact with trees that have a mysterious glowing branch, taking them to new area of the level.

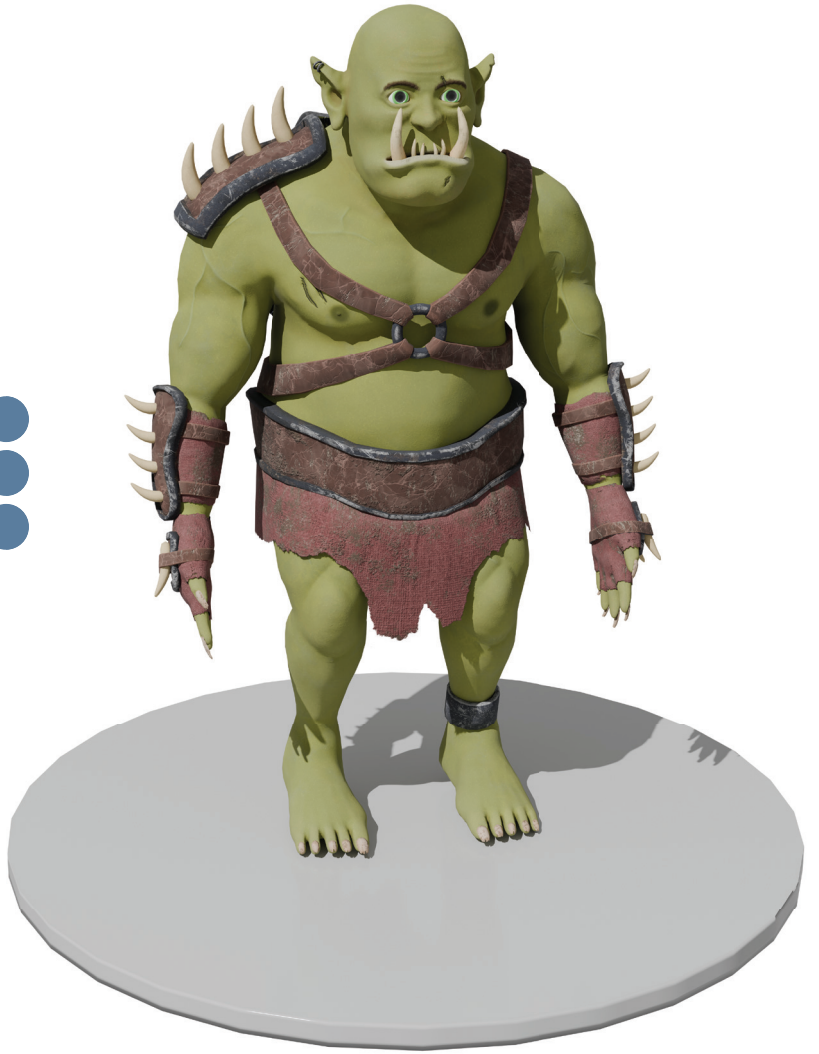
Each level will introduce the player to a new mechanic, and will sometimes challenge the player to use multiple different abilities to solve a difficult puzzle.

Level Layout

Each level consists of a primary destination that is easily visible or understandable to the player while also using a memorable ‘room to room’ layout that the players can easily backtrack through without getting lost.

The level also features a village inhabited by locals that inform the player about the games storyline and subtle hints to help them in the puzzles the player will face.

Final Project



Project Brief

This project has a large focus on showcasing my individual skills and an attempt to create a unique creative piece whilst developing a weaker area of my personal game design skill set.

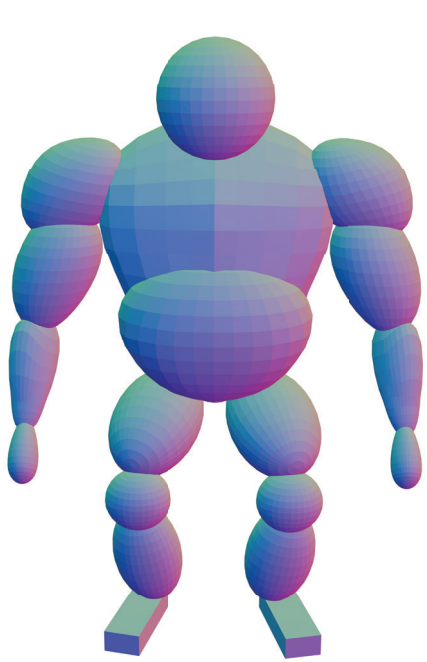
Character design has proven to be a personal weaker skill and I was determined to improve and create a high quality character piece.

It is important that the player can somewhat determine whether their next battle will be easy or difficult just by judging the characters appearance, without spoiling too much, such as a quick flurry of punches or a long range grab attack.

With this design I aimed to create a medium difficulty brute character, with the main reference of a medieval fantasy Orc monster and Dark Fantasy themed creatures from games such as Dark Souls and World of Warcraft.

Basic body proportions

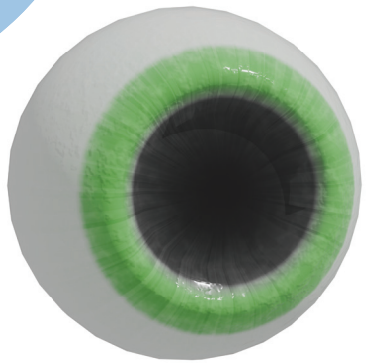
Using Blender, I used simple cube and spheres to create a basic humanoid shape, before manipulating these shapes to better reach the intended design.



Detailed Sculpting

With the basic proportions finalised, the next step was sculpt individual details and make more intricate shapes to the different parts of the body.

To aid this step, I researched human muscle anatomy, to ensure I was able convey a convincing character.



Additional Details

I included a battle-worn shield with the character, and plan on adding more details such as more armour pieces and fitting weapons.

Textures

Using Adobe Substance Painter, I started creating textures for the different character features.

The skin includes bumpy skin pores, multiple green hues and past battle scars.

Each armour piece holds a dark steel with eroded edge wear and layers of dirt, accompanied by torn red cloth and cracked leather.

Finally, I created a procedural Eye material in Blender, using a gradient to create a distinction between the Pupil and the Iris.

Project Conclusion

The next goal for this character is to create a working rig and set of animations including walking, running and attacking animations, in addition to a few extra details such as a weapon that matches the characters aesthetic.

Spider Sentinel Project

Project Brief

This smaller lab project involved the creation of a robotic character with spider-like limbs and learning the basics of character rigging.

Project Development

When making the limbs, it is important to keep in mind how many joints are going to be in the limb. In this case, each limb has 3 joints, with a fourth end joint.

I created bends in the limb where I envisioned each joint to be, and added some extra gear meshes at the joint location.

For the character design itself I took inspiration from robotic mechs and battle machines such as the AT-AT from Star Wars and the 86-Eighty Six Mechs.

Neutral Stance

Walking Stance

Attacking Stance

Contacts

Nathan Hiscock - LinkedIn
www.linkedin.com/in/nathan-hiscock-2581322b3

nathan_hgamedesign - Instagram
https://www.instagram.com/nathan_hgamedesign/?__pwa=1

Nathan Hiscock - Digital Portfolio
http://nathanhiscock.winchesterdigital.co.uk/