

Eddie Waite

557 Fishponds Road, Bristol, BS16 3AF
07963 385 009 • Edward2.Waite@Gmail.com

[GitHub Profile](#)

Personal statement

Having recently graduated from The University of West England (UWE) with a first-class degree in BSc Games Technology I am now looking to start my career in game development. I am an efficient and logical game programmer, problem solver and team player, which I have proven through many solo and group projects during my time at university, often taking a lead role in group activities.

Programming Languages and Skills

- Programming Languages (C#, C, C++)
- Development of formulas and algorithms for Artificial Intelligence (AI) application.
- DirectX11
- GitHub project management
- Software knowledge and experience:
 - Game Engines (Unity 3D, Unreal Engine)
 - 3D Software (Autodesk Maya and 3Ds Max, Blender)
 - Adobe suite (Photoshop, Flash, Illustrator)

Creativity and Communication

- Skilled in generating creative ideas, this is demonstrated through the games that I have planned and designed.
- Capable of producing aesthetically pleasing work, in a range of formats and software platforms – shown in a number of engaging presentations and projects that used a combination of materials.
- Creative skills developed through designing and creating a range of games including both 2D and 3D.
- Able to communicate clearly both written and verbally, which is enhanced through the use of other mediums, this is demonstrated in various university presentations and assignments.

Education

University of West England (UWE), Bristol, Avon.

(September 2017 – 2020)

BSc Games Technology – First Class Honours

Key Skills gained:

- Analytical and conceptual thinking;
- Advanced problem solving and numeracy skills;
- Accomplished communication skills, both written and verbal, developed through numerous assignments and digital media presentations;
- Proficiency in a range of specialist software, as detailed above;
- Learning multiple programming languages, as detailed above;
- Team working and project planning;

First year core modules: Introduction to Artificial Intelligence, Entertainment Software Development, Principles of 3D Environments, Game Development Evolution

Second year core modules: Low Level Programming, Gameplay Programming, Game Engine Architecture, Game Level Design, Play and Games

Third year core modules: Advanced Technologies, Audio-Visual Production, Creative Technology Project, Commercial Games Development

Final year projects:

- [Sokoban Gen](#) - Procedural generation system for generating unique Sokoban puzzles as part of a larger level structure using an algorithmic approach created for my dissertation project (Creative Technology Project).
- [Don't Walk By](#) - Polished game created as part of a larger cohort, made up of smaller teams with each team taking on individual responsibilities and game mechanics. (Commercial Games Development)
- [Back in my Day](#) - Virtual reality tour of historic music venues throughout Bristol created for the Oculus Quest within Unity3D. (Audio-visual Production)
- [Procedural Plant](#) - Procedural plant generation system with adjustable attributes which is capable of generating plant models which can be exported created using DirectX11. (Advanced Technologies)
- [Open world system](#) - Developed using DirectX11, handling the serialization and deserialization of chunks' geometry and positional data at runtime. (Advanced Technologies)

Coleg Ceredigion (Cardigan College), Ceredigion.

(September 2011 – June 2016)

Cambridge TEC Diploma in ICT Level 3

Overall Grade – DDD (Distinction, Distinction, Distinction)

Notable modules: Spreadsheet Modelling, Website Production, Computer Animation, Database Design, Digital Graphics

GCSE's including: Maths, English, IT, Media Studies

C++ Projects

[Procedural plant model generator](#)

The aim of this project was to create a procedural generation tool for generating foliage models using DirectX 11. The system is capable of generating multiple different plant types and is able to be modified by a user interface. The generated plant models are able to be correctly exported to the .OBJ file type. The system can produce 3 different types of plant model – flowers, vines and bamboo.

Each plant model is broken into multiple components which can each be altered by adjusting the local transform matrices. Each component can be repositioned, resized and rotated locally by adjusting their transform matrices, allowing for a wide variety in the resulting plant models.

The tool includes a user interface to allow the user to adjust the parameters which are used to determine the rotation, scale and position of the plants components. The user interface also allows the user to easily switch between plant types and export the resulting plant model to a .OBJ file once they are happy with it.

[Open world system](#)

The aim of this project is to implement an open world system within DirectX 11. The system is capable of streaming geometry data as a player moves throughout an environment, reducing the amount of data that is stored in memory. The system includes NPCs (non player characters) with a basic path finding AI allowing them to navigate throughout the scene. Serialization is also done on NPC and player position and path finding data allowing for their correct positions to be saved and loaded to and from the disk.

As the user moves out of range of a chunk, the buffers containing all of the geometry data for each of the objects within the chunk are shut down and the data is deleted from memory. When moving in range of a chunk that was previously out of range, new buffers are created using geometry data loaded from a binary file which was created when the system was first launched. This system greatly reduces the amount of data that must be stored in memory at any one time, as only the geometry of the objects that are in range of the player is kept in memory.

The NPCs are controlled using an A* pathfinding algorithm which allows for them to find the shortest path to a goal position, which can then be used to navigate towards the desired position.

Industrial-lives (Networked Multiplayer Game)

A networked multiplayer strategy game in which players take turns to take over a game board. This was developed as part of a team during university, however I played a key role in it's development. This game was developed using ASGE which is a game engine developed for the creation of 2D games using C++.

I took the lead role in the development of this game, primarily focusing on the implementation of networking features along with the core gameplay. The game features a lobby which can be hosted to allow clients to connect via an IP address. Once the desired number of players are connected the host can begin the game.

When a player takes their turn a packet of data is sent to the server and passed to each of the clients to then update the game board locally for each player. This allows for the current state of the game to be synced between the clients.

Game Jams

Global Game Jam 2020

Participated in the Global Game Jam 2020 in which I took the role of lead programmer, creating a 2D game within 48 hours based on the prompt 'Repair'.

Employment History (Seasonal)

Aviva, Bristol

Pension Administrator (July – September 2019 & July 2020 – February 2021)

Key achievements and responsibilities:

- Managed key processes as part of the pension remediation team;
- Quickly adapted to new systems through training
- Efficiently used corporate systems for the handling of several different processes;
- Worked effectively as part of a team, displaying effective communication in a professional setting;

TSB, Bristol

Project Administrator (July-December 2018)

Key achievements and responsibilities:

- Managed key processes in the mortgage operation division;
- Project management of remediation approach for mortgage customers;
- Effective team working and communication in a professional setting;
- Required awareness of multiple corporate systems and meticulous attention to detail;
- Training and mentoring of others in the use of the systems used daily;

Hobbies & Interests

I spend a lot of time designing and developing video games, this involves writing code and creating assets. I also enjoy creating a range of other digital media, including using software such as Autodesk Maya to model and animate unique 3D models and environments.

I also like to spend a lot of time outside, and quite regularly go camping in a range of locations with friends.

References available on request