

# RYAN WESTWOOD

## CONTACT

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http://ryanwestwood.co.uk

## EDUCATION

B.S Computer Games Technology  
Birmingham City University, UK  
September 2019 – June 2023

## INTRODUCTION

Dedicated and proactive C++ Gameplay/AI Programmer with 2 years of experience in the gaming industry. Proficient in designing, implementing, and fine-tuning game mechanics and AI behavior. Demonstrated ability to work collaboratively in team environments, striving for excellence and innovation in every project.

## WORK EXPERIENCE

### **Junior Programmer | Rebellion | 2023 – 2024**

- Implemented advanced gameplay features with a primary focus on AI mechanics, introducing innovative enhancements to in-game enemy behaviors.
- Developed comprehensive documentation outlining the design and implementation of AI features, ensuring code quality and adherence to project standards through rigorous reviews.
- Actively participated in sprint planning meetings, providing regular updates on AI progress, and collaborating with team members to refine and optimize game mechanics for an enhanced gaming experience.

### **Junior Programmer | Double Eleven | 2021 – 2022**

- Actively contributed to the Minecraft: Dungeons project by resolving bugs, optimizing platform-specific performance, and implementing innovative mechanics for existing bosses.
- Fostered a productive team environment through effective participation in daily meetings, delivering clear communication, and providing guidance to colleagues.
- Utilized industry best practices, including Pull Requests, methodologies, and bug tracking systems, to enhance project success.

## PROJECTS

### **BuildBuddy – 2023 (Docker)**

- Streamlines self-hosted GitHub Actions for C/C++ projects.

### **Carlo's Dungeon Crusade – 2023 (C++)**

- 2D action game with advanced AI, agile development, and smooth CI/CD.

### **AI Library – 2023 (C++)**

- Game dev library: pathfinding, finite state machines, behavior trees, and CI/CD.

### **Final Fantasy XIV Rotation Tool – 2022 (Python)**

- Developed a visual real-time aid that helps players learn in-game rotations.

### **RenderBolt – 2021 (C++)**

- Software renderer showcasing raytracing and multi-threading capabilities.

### **Unrealistic Engine 5 – 2021 (C++, OpenGL)**

- OpenGL graphics, ECS, cross-platform compatibility.

### **Wrath Of The Dead – 2021 (C++)**

- Dynamic UI, file I/O, A\* pathfinding, animations, collision detection.

### **Pirate Royale – 2020 (C#)**

- Produced a single-player pirate-based combat arena.

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## EDUCATION

September 2019 – June 2023

**Birmingham City University – BSc (Hons) Computer Games Technology**

Predicted Grade – First Class Honours

- **3D Game Programming (95%)** – 3D pirate ship game simulating a battle with AI enemy ships and different weather conditions made with Unity.
- **2D Game Programming (93%)** – Side scrolling 2D pirate game in which you avoid obstacles and shoot enemies created with Unity.
- **C++ Programming for Games (92%)** – Wrath of the dead, a 2D shooting game using A\* Pathfinding, Object Pooling, Variadic Templating, Lambdas, Object Oriented Design incorporating SDL libraries.
- **Data Structures and Algorithms (86%)** – A&E simulation by creating data structures which use efficient sorting algorithms written in Python.
- **Professional Practice for Game Development (78%)** – Improve and develop games in groups of 4 students, to enhance teamwork skills.
- **Web Game Development (76%)** – Created a website which hosted a reaction / endurance game. Users created accounts which are held in a database and required to access the game. Written with HTML, CSS, JS.

September 2017 – 2019

**Dudley College – BTEC IT Practitioner**

Grade – Distinction Merit Merit

- **Event Driven Programming (Distinction)** – Pete's Plumbing is an invoice system that produced an itemized receipt. Used VB.
- **Object Oriented Programming (Distinction)**– Developed a 2D space game which had movement, shooting and collision detection with Java.
- **Procedural Programming (Distinction)** – Created a calculator application with mirrored the functionality of a normal calculator. Used C#.

September 2010 - 2015

**Holly Hall Academy**

Grade – 5 GCSE's grade C and above include Math's (A) and English (C)

## SKILLS

- C++
- C#
- CI/CD
- Docker
- Python
- Azure Dev Ops
- Git Bash
- Unity Engine
- Unreal Engine
- Visual Studio
- CMake
- Command Line
- Linux
- SDL
- OpenGL