



SUMMARY

I am a fourth year student at Abertay University soon to graduate the Computer Game Applications Development degree and have a strong interest in gameplay programming. Winner of the Abertay Digital Graduate Show 2026 - Ninja Kiwi Award for Games Programming.

I have been creating games since I was 9 years old, starting with MIT's Scratch, then eventually moving on to more professional tools and environments. This has led me to where I am today, studying games programming at university, as well as creating games in my spare time.

I have several years of experience in C++, C# and various engines such as Unity, Godot and an in-house engine made by Abertay. I consider myself to be a fast learner, have strong teamwork and problem solving skills, and am always up for a new challenge.

EDUCATION

 **Abertay University, Dundee** (Sept 2022 - present)

Currently studying for BSc (Hons) in Computer Games Applications Development, in my fourth year.

- PlayStation 5 game development, in a team with 2 other programmers (A+)
- SFML/C++ game, solo project (A+)
- Unreal Engine/C++ mechanics demo, solo project (A)
- Networked multiplayer C++ game, solo project (A)
- Unity Engine/C# game, in a multi-disciplinary group of 7 (B+)
- Graphics programming with DirectX 11, solo project (A)
- Multi-threading with C++/DPC++, solo project (A+)

 **North Berwick High School, East Lothian** (Aug 2016 - May 2022)

- Higher: English (A), Maths (A), Computing Science (A), Graphic Communication (A), Physics (A), Art Design (B)
- Advanced Higher: Art and Design (A)

SELECTED PROJECTS

Chunklands (Godot, C#, 2026)

A 3D platformer prototype with procedurally generated levels. This was a solo project made for my university honours. Level generation, player character, and level mechanics were all developed by myself, using Godot and C#.

The game features seed-based randomly generated levels with gameplay mechanics and level design tailored to the 3D platformer genre. Levels are constructed from pre-designed level chunks, similarly to the games Spelunky and Dead Cells, and contain parameters to provide variation to terrain shape, object usage and visuals.

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SKILLS

Languages:

C#, C++ and Python

Engines/frameworks:

Unity, Godot, Unreal, SFML, Abertay's in-house engine for PS5

Key skills:

Natural ability to see things from a different perspective, fast learner, teamwork, critical thinking, problem solving, effective communication

Other technologies:

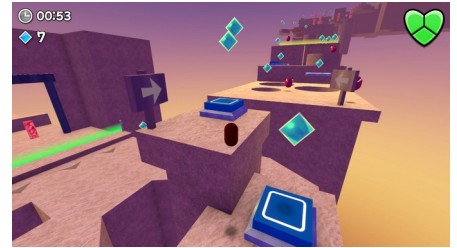
GitHub, Visual Studio, Photoshop, GIMP, Illustrator, Inkscape, Aseprite, DaVinci Resolve

HOBBIES

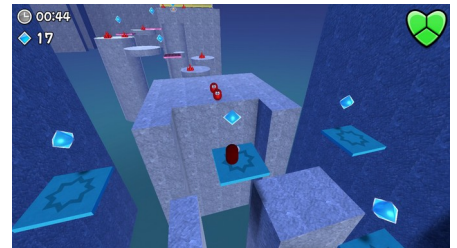
- Making games with Godot
- Participating in game jams
- Graphic design, pixel and vector art
- Running
- Video editing



Each chunk contains spawn points assigned to different object categories (e.g. enemies, platforms, movement aids). Different objects are used for each spawn point depending on the level's randomised object palette, ensuring each level has a focused theme. Chunks further into levels utilise a higher number of enemies and hazards, resulting in a gradual difficulty curve throughout the level.



The player controller utilises variable jump height, coyote time, jump buffer, and other techniques to ensure the player character feels responsive and satisfying to control. The player can also perform Mario-styled wall jumps, as well as attacks to knock back and defeat enemies.



A dynamic camera system was created, ensuring that it never clips inside of terrain, through the usage of raycasts. Additionally, the camera automatically adjusts its direction based on player movement, reducing the need for manual camera adjustment, however it can still be overridden by the user.

Kart Racer for PlayStation 5 (In-house engine, C++, 2024)

A Mario Kart-like game developed in a team with 2 other programmers. This was a university project made using Abertay's in-house engine for PlayStation 5. I developed the kart controls and mechanics, featuring Mario Kart-styled drifting (hop, drift, then release for a boost) and spinning out upon collision with obstacles.



The game also features items, most of which I developed myself. This included cones that can be dropped or thrown onto the track or held as defence, bowling balls that travel forwards or backwards in straight lines, speed boosts, invincibility and triple variants of the cone and bowling ball.



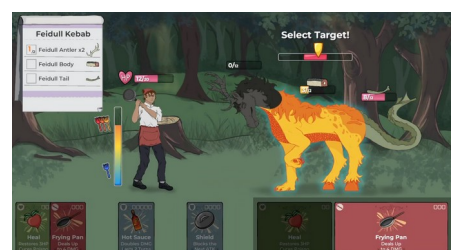
I was also responsible for the game's camera system that smoothly follows behind the player, menus, HUD and helped with the checkpoint system that counts laps and determines respawn positions.

Slay 'n Sauté (Unity, C#, 2025)

A demo for an RPG featuring a mix of combat and cooking elements, made with Unity and C#. This was created as a university project in a multi-disciplinary group of 7 and I made its turn-based combat system and its user interface.



The player can queue up a selection of cards, representing possible actions, to be performed each turn. Actions include various attacks, healing and ones that apply beneficial status effects. Cards can also be marked as unwanted, which will remove them from the player's deck and swap them with new cards upon their next turn.



The player fights an enemy which is split into 3 distinct parts. The players can choose which segment to attack, and each segment has its own health bar and unique item drop. The fight ends when all enemy parts are fully depleted or the player loses all their health.

Further information on these projects as well as additional projects can be found on my [portfolio](#).