

DANNIELLE G. SMITH

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I have a passion for games programming, with a focus on visual quality and gameplay. I am committed to the continuous learning and improvement of my skills and myself. I hope to help create games that bring joy to others, and be able to commit myself to the creation process,

EXPERIENCE / PROJECTS

HONORS PROJECT - TOOL CREATION FOR AN IN-HOUSE ENGINE: HOW DOES ONE CREATE A SHADER/POST-PROCESSING TOOL FOR USE IN EDUCATION?

01/09/2024 – 10/05/2025

The tool supports the creation of shaders and post-processing effects, with research focused on making shader development and graphics programming more fun and accessible. This tool was made in a new, still in-development in-house engine, as such the documentation and support were lacking and with frequent updates the tool has been forced to face many iterations and “resets”.

This project includes:

- A shader library (with a collection of pre-built shaders that developers can easily apply and customize. As well as simplified code/functions),
- A visual Editor (GUI, for creating and modifying effects without extensive coding knowledge.)
- With a Preview feature (: A preview mode to see changes in real-time whilst the program is running.)
- Code documentation (both built in (currently via tooltips and comments) and a more comprehensive manual available on a separate pdf file).

The prototype was in DirectX11 with all the above features in their basic forms, the official tool was then made in the in-house engine that uses DirectX12 as a base. For a more in-depth review go to my portfolio.

BOW – GAME MECHANIC

Solo project

11/09/2023– 13/12/2023 updated on 08/12/2024

A bow mechanic that allows the user to fire arrows in a manner inspired by a popular RPG game, Monster Hunter: Rise (Capcom, 2021) and other games from the franchise.

The Project is made up of several components:

1. Multiple abilities/attack that Includes: an ‘Arcing area of attack arrow’, a ‘Default arrow’, and a ‘Special arrow’. All attacks damage will vary depending on how long the bow has been drawn
2. Basic Stamina system/ Health system.
3. Basic character locomotion.
4. Basic enemy AI.

I’ve implemented all animations using unreal engine 5’s built in animation system.

Recently updated to include Environmental Audio, footsteps with different surface audio, and a Stamina/Breathing system, where breathing gets heavier with dwindling stamina.

ARCADE HERO - GAME JAM

Cryptonic Studios

01/11/2023– 28/04/2024

On this project I was responsible for the character menu, leveling/upgrading characters, party management, and implementation of character animation. And co-developed the character abilities and turn base battle system. The game was created in a studio setting with 3 teams; art, design, and programming. I was a part of the programming team but also was involved in the design team. The game was a gatcha, turn based 3D battle game.

THE RIG - GAME JAM

Infinite games no, games

20/09/2024– 28/09/2024

Gameplay/mechanics programmer and illustrative artist. On this project I was responsible for the menu, creation 2D/3D assets, implementation of task sounds, and the rope/bungee mechanic. As well as co-developing game play and game mechanics.

This project was a short 1st person horror game that involves the player completing a series of tasks whilst keeping your eyes off the monster, whilst the player's sanity dwindles away.

LITTLE LIGHT

WaxMelt Studios

01/01/2023– 30/04/2023

On this project I was responsible for the player, camera, sound, and UI programming. I worked with another programmer/ designer to create a 2.5D platformer centered around a unique mechanic, for this game the player was a small robot and the environment around the player changed if the lights where on or off.

SKILLS

- Adept in C++ and python
 - Experienced in Unreal 5, Unity and SFML
 - Adept in HLSL/GLSL for shader programming
 - Debugging skills
 - Experience with implementing 3d animation in Unreal using blendspaces, blueprints, animation sequences, state machines, montages, etc...
 - Experience in using GitHub and Git Bash
 - Experience with creating tools and documentation for emerging/in-development in-house engines.
 - Experienced with DirectX11, OpenGL and DirectX12 based API
 - Exceptional communication and teamwork skills
 - Adept in 3D mathematics and physics
 - Experienced in creating/designing 2D and 3D game assets in clip studio and blender
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EDUCATION

BSC [HONS] COMPUTER GAME APPLICATIONS DEVELOPMENT

Abertay University

11/09/2021 - 11/07/2025

- Member of Abertay Game Development Society
 - Relevant Coursework: CMP400 Honours Project Proposal and Execution (in progress), CMP403 Honours Project Dissertation (in progress), CMP301 Graphics programming with shaders (B), CMP203 Graphics programming(B+), CP302 Gameplay mechanics development(B), MAT202 Mathematics for Application Development 2 (B+)
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