

Dominik Wylie

Software Developer

Embedded, Tools, Web

I am a graduate games programmer who studied at Abertay University and achieved a 2:1. Throughout my education and personal projects, I have gained knowledge from Tools and Gameplay/Mechanics to Network and Shader programming. I have most of my programming experience in C++ engine free and within UE5, and I have used C# with Unity, HLSL, and Java. I always strive to be learning new things, I am an extrovert and I love working and collaborating in teams and working with designers and artists to bring their ideas to life. I have a strong interest in, and currently learning embedded systems.

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Github
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Projects

Technical Skills

C++ Git Threads
Web Dev CSS
Java Databases
Network Programming
Octrees Algorithms
Unreal Engine Unity
Tools Programming
Technical Design
Gameplay Programming
Mechanics Programming
DX11 HLSL LaTeX
HTML SFML

Other skills

Teamwork
Communication
Organisation
Problem solving
Start Windsurf instructor
Powerboat level 1
First aid
Boat and board repair
Skilled labourer
Driving Guitar

Boids, Tools & Octrees

Personal Project

I developed a Boids and octree algorithm as a personal project during the summer. It consisted of learning and building quadtrees to learn the fundamentals, then octrees and a boids algorithm. I deepened my knowledge of design patterns, polymorphism, data management, single source of truth, smart and raw pointers, recursion, AI, emergent properties, tools and clean code. I created the octrees as a UE5 plugin out of interest of learning more UE5, sharing my code with others and tools development.

Tools Project

Jan - May 2025

Abertay University

I was tasked on creating a tool for a bare bones project inspired from the World of Warcraft world editor. I created a Gizmo using DXTK's primitive lines, the user can select an object and drag in a single dimension or in a plane by selecting the smaller squares. I created static functions for the picking intersections and created a custom picking function for the gizmo to make it light weight and reusable. When the user hovers over the line or plane, it turns white to indicate what one is hovered. I learned and used the observer pattern with interfaces to control inputs and organise the subscribed objects. This project inspired my interest in tools programming and design patterns.

Left Upon Read - Triple Seven Studios - Dare Winner 2024

Feb 2024 - Present

Dare Academy - Abertay University - UE5 - Soon to be Indie Studio

Left upon read is a game inspired by Dishonored, DOOM and ULTRAKILL where the player is tasked with balancing answering messages on their "iStone" and fighting enemies with their sword and spells. All the programmers helped where needed, I focused on the phone mechanic, messaging, bug fixing and player experience. The phone mechanic consists of a message editor tool for designers to add, edit and remove characters, messages, response options and character responses that is written in Jason format. Logic within unreal to read, organise and display the messages at the appropriate time, the ability for players to read, navigate and respond to messages with a visual 2D display shown in the world with Unreal engines UMG systems. We are starting a rewrite to use better systems and techniques, using Lyra as a reference. This includes code review and automated testing; as we plan to take this forward and build a full game.

Activities

Outside of programming and games, I have a passion for windsurfing, I really enjoy the sport and a really enjoy teaching. There's something great about explaining something to someone, they completely understand and seeing their excitement from what you taught. I boulder every week and enjoy road cycling. I also play guitar and vocals, I have played most days of the week for years and plan to go to some open mic nights and continue to develop my skills.