Jack Bulson

Gameplay Programmer

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Personal Profile

Video games were a large part of my life growing up. They gave me new experiences, a way to escape and provided me with a sense of community. I grew up knowing that I always wanted to be part of the people that make them. I am a reliable, friendly, and hard-working individual, and enthusiastic to learn new skills and solve problems in order to create great experiences for people to play and enjoy. I enjoy working across disciplines to come up with solutions that serve everyone and make for satisfying experiences as the player.

Employment

Programmer

Sumo Newcastle
2024~

- Worked on **Critter Cafe**, a critter collecting, cafe management cozy game.
- Implemented each of the **character's tools,** leveraging the Gameplay Ability System
- Worked with artists to ensure the tools **visuals** were able to be implemented as desired
- Implemented **puzzle ingredients**, which consisted of blocks, switches, redirectors and more.
- Worked with level design to build **in-editor functionality** to setup grids for these ingredients
- Improved our project's usage of **collision presets & responses** to ensure correct behaviour
- Improved the **game feel** and **UX** of placing and moving around objects

Graduate Programmer

Sumo Newcastle
2022 ~ 2023

- Worked on **DeathSprint 66** as the lone programmer in a small feature team in pre-production, where we prototyped ideas for the full game
- Gained experience with **networking & replication.**
- Implemented **UI**, such as in-game leaderboards.
- Worked on a **shelved project** for the first 7 months.
- Implemented **outlines** for highlighting interactable objects.

Projects

Vulkan/Rust Game Engine

2022 ~ 2023

- Implemented **PBR**, basic **shadows**, **bloom**, **reloadable shaders**
- Used **bindless rendering** to allow for efficient draw call batching and resource management
- Added particle systems which could create **2D or 3D particles**
- Integrated **egui** so I was able to quickly and easily create simple UI
- Created a **RenderList** which was essentially a simplified version of a **RenderGraph**, allowing me to abstract RenderPass building away in a simpler and easier to use interface

C++/Vulkan Hydraulic Erosion Simulation (4th Year University Project)

2022

- Implemented a simple form of water erosion
- Utilised **compute shaders** to create a GPU version of this simulation
- Compared performance(visuals & speed) between CPU and GPU

Technical Skills & Qualifications

- 3 years industry experience using Unreal Engine/C++/Blueprint
- MComp Computer Science (Games Engineering) Newcastle University, UK (1st)