
Madeleine Kay - Gameplay Programmer

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EXPERIENCE

Waving Bear Studio - Programmer

APRIL 2020 - FEBRUARY 2023

I worked on Stuffed, a co-op FPS game developed in Unity for PC and Xbox. I worked on the game from before its release into Steam early access.

- **Gameplay:** Extended the enemy state machine AI and added new enemy types. Implemented more complex AI using behaviour trees for a boss enemy and bot players. Implemented a progression system so players could earn XP and buy upgrades. Added new power-ups and extended the powerup system to add ultimate abilities. Worked with artists and animators to create a hit reaction system for enemies.
- **Systems:** Added PlayFab statistics integration with server-side validation for storing data for achievements and leaderboards. Added PlayFab Inventory integration for validating and saving what skins the player owns. Worked with artists to create a player customisation and wardrobe system. Added a debug panel to help with playtesting and making trailers.
- Ported the game to Xbox One and Xbox Series consoles.

Mooncat Studios - Gameplay Programmer and Co-Founder

DECEMBER 2018 - MARCH 2020

I helped co-found Mooncat Studios as part of my MA in Entrepreneurship. I worked on Inkbound, a narrative-driven digital board game where players use their phones as controllers. The game was developed in Unity and I helped develop a vertical slice that was shown to publishers.

- **Gameplay:** Implemented AI for friendly and enemy NPCs using behaviour trees. Implemented a 2D grid with A* pathfinding for combat. Designed and implemented combat abilities for players and NPCs. Implemented mobile combat mini-games. Worked with a writer to extend the dialogue system.

SKILLS

- C#
- C++
- Unity
- Unreal Engine
- Git
- Agile/Scrum

EDUCATION

Falmouth University

MA Entrepreneurship - Merit 2018 - 2019

BSc Computing for Games - First 2015 - 2018

ACHIEVEMENTS

Presented at FDG 2018 - Curiosity in Games Session: The effect of visualising NPC pathfinding on player exploration.