Alec Wolf

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PROJECTS

Willow Wood Refuge – *Team of 12, Lead Programmer, 7 Months*   **Spring 2021**

A 2D classic pixel style platformer/exploration game developed in the cross platform MonoGame framework using C# and GitHub. The player is a hermit in a dangerous forest who must explore, forage, and cook to nurse a lost group of refugees back to health.

- Programmed a bespoke 2D physics engine, idle NPC dialogue system, NPC navigation and behavior AI, stylized dither shadow shader, and various weather effect shaders
- Created additional utilities and functionality for tile map parser, asset management, camera view matrix, and rendering pipeline
- Collaborated with producer to create schedules, tasks, and manage a realistic scope throughout the project

Something Fishy – *Solo, 2+ Months (Ongoing)*   **Summer 2020**

An experimental 3D low-poly simulation developed in Unreal Engine 4 using predominantly C++ with small amounts of Blueprints. The player explores islands in the sky catching flying fish and trading fish with a turtle for bait in order to catch more fish.

- Implemented eight behavior forces for fish including the three original boid flocking behavior rules and a cell grid to optimize visibility calculation
- Created prototypes for procedurally generated island meshes using noise
- Developed a player class with a ray trace for object selection/interaction and custom movement controls

Paltergeist – *Team of 3, Lead Programmer, 5 Weeks*   **Spring 2020**

A 2D web-based puzzle game developed in Phaser3 using JavaScript with GitHub. The player is a ghost who must possess and move/scale objects in an old mansion in order to help a child ascend and retrieve their lost balloon from the attic.

- Built a custom finite state machine for AI movement/behavior, resource management system for dynamically changing levels, and optimized physics
- Managed task assignment and created a chart for the structure of the game system

SKILLS

Programming Languages: C, C++, C#, Java, JavaScript, Python, GLSL, HLSL, MIPS

Engines: Unreal Engine 4, Unity, MonoGame, Godot, Phaser 3

Utilities: Git, Trello, Jira, Adobe Photoshop, Adobe Illustrator, Maya, Blender, Substance Painter, Excel Spreadsheets

EDUCATION

University of California, Santa Cruz   **Graduated June 2021**

B.S. in Computer Science: Computer Game Design, *magna cum laude*

UC Santa Cruz Dean's Honors List x6, Fall 2019 to Winter 2021

Earned a quarter GPA of 3.73 or better while enrolled in 15 or more quarter units