

Heather Zeis

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// Unannounced VR Project (Ready at Dawn) *Jan 2024 - Aug 2024*

- Built a performant foliage animation system based on UE5's builtin Pivot Painter tool
- Helped port material system from RAD's proprietary engine to UE5 material graph

// The Art of Flight (Et al Games) *Jan 2023 - Jan 2024*

- Classic shmup with simple watercolor graphics, developed with a team of 2
- Handled all graphics and rendering tasks, including building a custom backend-agnostic graphics library (lovingly named RenderBoy)
- Built with our custom Etcetera engine (same team and engine as Changes, listed below)

// MTG Arena (Wizards of the Coast) *Feb 2021 - Jan 2023*

- Member of the Rule team, responsible for implementing functionality for new card designs
- Helped maintain a natural language processing system and compiler for automatically generating executable code from card rule text

// Resident Evil 4 (VR) (Armature Studio) *Fall 2019 - Feb 2021*

- Designed a VR UI system that's used extensively throughout the game
- Implemented several in-game menus with complex VR interactions
- Wrote a suite of Python tools for performing large-scale data conversion and asset analysis

// Fail Factory port (Armature Studio) *Summer 2019*

- Sole programmer on port from Oculus Go to Oculus Quest
- Original game was released with Unreal 4.18, required upgrading engine and numerous forward-incompatible customizations to Unreal 4.23
- Rebuilt several core gameplay systems to support 6-DOF tracking and multiple controllers

// Sports Scramble (Armature Studio) *Dec 2018 - May 2019*

- Multiplayer VR Wii Sports-like, made in Unreal 4
- Rebuilt core parts of level loading system to work in a multiplayer context
- Implemented a system to prevent soft locks in the event of adverse network conditions

// From Other Suns (Gunfire Games) *Aug 2016 - Jan 2018*

- VR FTL-em-up, made in Unreal 4
- Worked closely with designers to implement a wide variety of gameplay features and provided engineering support so their systems would work reliably in a networked environment
- Built player inventory system, prototyped several versions of the universe navigation system, and lead development of the tutorial

// Etcetera (Et al Games) *Oct 2015 - Present*

- Developed a cross-platform (Windows/Linux) C++ game engine with a team of 2
- Implemented a C++ parser/code generator to support a performant type introspection system
- Developed a Constructive Solid Geometry level building tool, an asset management system, a general purpose serialization format, a backend-agnostic rendering library, and much more

// Changes (Et al Games) *Mar 2018 - Jun 2020*

- Sokoban game developed with the Etcetera engine, with a team of 2
- Responsible for most programming tasks on the initial prototype, including a replay system for recording playtest data

// Technical Skills

- Languages: C, C++, C#, Python
- Engines: Unreal 4 (C++ and Blueprint), some experience with Unity