Medusa Slockbower mslockbo@gmail.com | mslockbo.org | (201) 661-3415 | Mahwah, NJ

Education

DigiPen Institute of Technology – Redmond, WA April 2024
Bachelors of Science: Computer Science and Real-Time Interactive Simulation

Experience

Graphics Programmer & Technical Artist August 2022 – April 2024

Sleepy Spirit – Kilonova, DigiPen Institute of Technology – Redmond, WA

- Developed Arena & Gate systems to handle interaction with arenas which interacts with the Enemy Wave System
- Created procedural animations and VFX for Gates, Cinematics, and Foliage to further the visual narrative
- Acted as a debugging generalist for all disciplines helping to resolve issues either as-needed or before builds
- Acted as build manager for Windows, Linux, & SteamDeck, which allowed us to achieve delivery goals
- Setup in-engine and custom tools for environment and our combo system, helping streamline testing for artists & designers
- Developed systems for handling in-game cinematics to setup the animation sequences and audio

Technical Director & Graphics Programmer August 2021 – April 2022

Cloud Cats – Return to the Skyway, DigiPen Institute of Technology – Redmond, WA

- Managed a team of 6 programmers to develop CloudEngine which was used to make Return to the Skyway
- Directed engine architecture and coding standards to maintain consistency in source code
- Facilitated interdisciplinary communication and Scrum planning, resolving blockers and assigning tasks
- Implemented a 2D OpenGL rendering pipeline for CloudEngine, used to render raster graphics in 2d space with layering
- Created tools for artists in engine to use raster graphics, spritesheets, and skeletal animations made in Spine
- Created an animation rail system for final boss sequence with events for gameplay and audio
- Developed a GPU accelerated OpenGL particle system for CloudEngine which allowed our VFX artist to create signifiers

Open Source

Programmer & System Designer February 2025 – Present

fennec, git.mslockbo.org/fennec-org/fennec

- Create thorough documentation of the engine for end-users to make learning more accessible
- Design engine architecture to determine how systems interact which results in cleaner interconnections and dependencies
- Re-implement the C++ stdlib to standardize implementation across compilers and to increase legibility
- Implement a comprehensive mathematics library to fit the OpenGL 4.6 Shading Language Specification
- Develop a memory management library for safer memory handling and to enhance debugging
- Implement a windowing system that supports multiple platforms and operating systems (on separate branch temporarily)

Skills

Programming

- Languages
  - *C/C++*
  - *C#*
  - *Java*
  - *Python*
- Scripting
  - *GDScript*
  - *Blueprints (Unreal)*
  - *VEX (Houdini)*
- Graphics
  - *OpenGL – GLSL*
  - *Vulkan – HLSL*
- Engines
  - *Unreal / Unity / Godot*
- Build Systems
  - *Make*
  - *CMake*
  - *vcxproj*
- Debuggers
  - *MSVC*
    - *NatVis*
  - *GDB*
    - *PrettyPrinters*

Art

- Software
  - *Paint.NET*
  - *GIMP*
  - *Inkscape*
  - *Adobe Illustrator*
  - *Blender*
  - *Maya*
  - *Houdini*
  - *Substance Painter / Designer*
  - *Materials / Niagara (Unreal)*
  - *VFX / Shader Graph (Unity)*
- Shader Design
- Material Design
- Post Processing
- Tooling
- Procedural Content Generation
- Atmospherics & Lighting
- Cinematography
- Hard Surface Modeling
- Stop-Motion Animation

Interpersonal

- Agile / Scrum
- Iterative – Incremental
- Top – Down
- Bottom – Up
- Interdisciplinary Coordination
- Code Reviews
- Pairs Programming
- Documentation
  - *Doxygen*
  - *Javadoc*
  - *Markdown*
  - *LaTeX*
- Version Control
  - *Git*
  - *Subversion (SVN)*
- Languages
  - English – Fluent
  - Spanish – Intermediate