Logan Harvell

Game Programmer (407) 462-2434 | logan@harvell.biz | logantharvell.github.io

Technical Skills

Languages: C/C++, C#, Assembly, Bash, Lua
Versioning: Perforce, Git
Engines: Unreal Engine 4 (UE4), Unity
IDEs/Tools: Visual Studio, XCode, Jira

Experience

Studio Chili Orlando, Florida

Keepers of the Trees, Lead Programmer *Dec. 2019 – Present*

- Created a local co-op puzzle platformer with a team of 22 people in **UE4**
- Led the programming team, managing meetings, assigning tasks, and performing weekly reviews
- Implemented a flexible shared screen camera system and a checkpoint-based respawn system in **C++**

University of Central Florida Orlando, Florida

Institute for Simulation and Training, Research Assistant *Dec. 2018 – Aug. 2019*

- Built a **UE4** plugin in **C++** for reading geospatial data using GDAL
- Generated procedural meshes and dynamic materials from attribute data embedded in GeoTIFF files
- Designed a component to simulate different IR camera views and heat absorption over time

Projects

Fiea Game Engine

- Created linked list, vector, hash map, and various adapter containers in **C++** modeled after STL
- Designed a property-centric reflection system using a custom runtime type information (**RTTI**) class
- Architected an Entity system that enables hierarchical game object composition alongside properties
- Implemented a parser to support **data-driven** development with **JSON** as a configuration language
- Recreated the *Super Bomberman* battle mode using the engine and **OpenGL** with five programmers
- Developing a rendering abstraction layer for enabling arbitrary modern rendering API support

Astral Pathfinder

- Created a galaxy conquest sim, where players aim for a high score by expanding their population
- Prototyped in **C** with **ncurses**, turn-based, similar to the resource management game Hammurabi
- Re-invented in real-time with 2D graphics using **C++** with **SDL2** frameworks
- Built an interface to use **Lua** as a configuration language for data-driven parameters
- Implemented procedural planet map generation, semi-realistic population growth, and random events
- Designed a generic collision component with circle, axis aligned, and oriented bounding box collision

Bounce Off

A head-to-head competitive game written in **68K assembly**. Players use momentum to control a ball and be the first to pick up 9 randomly spawned points while bouncing off all surfaces, including each other.

Education

University of Central Florida, Florida Interactive Entertainment Academy Orlando, Florida

M.S. Interactive Entertainment, 4.0 GPA Aug. 2019 – expected Dec. 2020

University of Central Florida, College of Engineering and Computer Science Orlando, Florida

B.S. Computer Science, Cum Laude, 3.78 GPA Aug. 2015 – Dec. 2018