
Technical Skills

Languages

C/C++ (proficient)
C# (proficient)
Python (familiar)
Javascript (familiar)

Software

Git/Mercurial/SVN
Make/Premake
Buildbot
Unity

Libraries

STL
TinyXML
OpenGL
Unity Scripting API

Selected Student Projects

AI Programmer

8/2015 - 4/2016

Retrospect - Cooperative first-person shooter where players work together to take down a boss.

- <> Constructed a waypoint connector tool for Team Bear King's custom editor, speeding up level creation
- <> Designed a modular, data-driven steering behavior system for easy behavior generation in **Unity**

AI / Gameplay Programmer

1/2015 - 4/2015

Genetic Drift - a top-down 2D Fast-Paced couch play twin stick arena shooter where you engineer organisms for battle by choosing their abilities. Features AI opponents to fill missing player slots.

- <> Worked on a Goal-Oriented Action Planning (GOAP) implementation in **C++** for emergent AI behavior which led to flexible AI actors that could use new abilities with hardly any new code
- <> Fixed engagement problems in matches by Creating a system for making level events inside of our custom Entity-Component-System based engine.

Tech Director / Graphics Programmer

8/2014 - 12/2014

Astral Lune - a 2D platformer in which players utilize a special reflection mechanic to traverse the world.

- <> Completed an **OpenGL** graphics engine, and wrote all of the games shaders in **GLSL**
- <> Designed core engine in **C++**, utilizing a component-based design to make engine easy to expand
- <> Wrote a custom memory manager, allowing for quick creation of contiguous components in memory
- <> Setup a prebuild system using **Premake**, making it easier to use version control on the project

UI Programmer

12/2014

TCOBO Ninja for Ludum Dare 28 72-hour Game Jam - a multiplayer twin-stick shooter with ninjas.

- <> Implemented menus with data driven menu items for fast menu modification in **Python**
- <> Wrote multiplayer controller input logic with player controller assignment in menu

Work Experience

Zero Team Intern

3/2015 - Current

DigiPen Research and Development

- <> Used **Python** to Extend our **Buildbot** Continuous Integration System
- <> Constructed a tool in **C++** for the Zero Engine using **TinyXML** to parse Doxygen's XML output and extract useful documentation from it to be used for both the Code Index documentation and the editor

Lead Activities Coordinator

6/2014 - 8/2014 & 4/2015 - 8/2015

DigiPen ProjectFUN Summer Workshops

- <> Managed a team of 4 coordinators to lead all High School afternoon activities
- <> Part of core design team for a content-rich Tabletop RPG designed to help encourage engagement in classes and positive interactions between students

Education

DigiPen Institute of Technology

2013 - 2017 (est.)

Bachelor's of Science in Computer Science