Joshua Shlemmer
AI / Gameplay Programmer

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Technical Skills

Languages	Software	Libraries	AI Techniques
C/C++ (proficent)	Visual Studio	STL	GOAP
C# (proficent)	Git/Mercurial/SVN	.NET	Behavior Trees
Python (familiar)	Make/Premake	OpenGL	A* Pathfinding
GLSL (familiar)	Unity	Unity Scripting API	Steering Behaviors

Selected Student Projects

AI Programmer
8/2015 - Present

Retrospect - multiplayer first-person shooter where as new rounds start, players will find their past lives replaying the previous rounds. The player can turn these past lives into AI teammates.

<> Authored an easily extendable waypoint **pathing system** that allowed for fast addition of new features
<> Created 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
<> Tested AI systems in **Unity C#** then ported them to Team Bear King's **custom C++ Engine** for rapid prototyping of AI systems, which gave the designers a chance to build gameplay around the AI early
<> Worked with a designer to realize the behaviors in their mind map, allowing AI to match the game vision

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 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 (72 hours)

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

<> Designed/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

Lead Activities Coordinator
6/2014 - 8/2014 & 4/2015 - 8/2015

DigiPen ProjectFUN Summer Workshops

<> Managed a team of 4 coordinators to lead for 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 Instutute of Technology
2013 - 2017 (est.)

Bachelor's of Science in Computer Science