Joshua Shlemmer

Software Engineer

Experienced in Build Systems and Game Engine Development

360-471-5399
joshuashlem@gmail.com
linkedin.com/in/joshua-shlemmer
Joshuashlemmer.com

Skills

Languages	Technologies	Platforms	Additional
C++ (Proficient)	CMake	Windows (Proficient)	Game Engine Dev
C (Proficient)	Buildbot	Linux (Familiar)	Tools Programming
Python (Proficient)	Git	WebAssembly (Familiar)	Build Automation
JavaScript (Familiar)	Phabricator		Game AI Programming
PHP (Familiar)	Visual Studio		Multiplatform Development

Professional Experience

Software Engineer - DigiPen R&D – Zero Engine Team

JANUARY 2018 – SEPTEMBER 2018

Zero Engine is an open source, component-based, 3D game engine with every major system written in-house. (zeroengine.io)

- Ported the Zero Engine over from a Visual Studio project to a CMake project, enabling cross-platform development.
- Co-Created a presentation/tutorial using the knowledge from porting the Zero Engine project to teach students and CMake beginners how to get started using best practices. (github.com/playmer/CMakePresentation)
- Wrote a CMake utility that allowed for adding new external libraries with minimal script changes to reduce the need to make unnecessary CMake changes.
- Developed a Phabricator markdown exporter in C++ for the doc tool, reducing the doc upload process to running a script.
- Extended the core engine's documentation system to export template information, allowing for better type information in the code ref and in editor tooltips to improve type discoverability for users.
- Added support in the team's Buildbot configuration for testing WebAssembly and Linux builds, learning the build pipeline for both platforms in the process.

Intern - DigiPen R&D – Zero Engine Team

MARCH 2016 – JANUARY 2018

Zero Engine is an open source, component-based, 3D game engine with every major system written in-house. (zeroengine.io)

- Extended Buildbot by writing custom steps in Python to allow for automated tests on more development branches so bugs could be caught before ever being merged into a release build.
- Constructed doc tool in C++ to parse Doxygen output and combine it with Zero Engine output to increase accuracy of both the code ref online as well as the tooltips displayed in the engine's editor.
- Introduced macro expansion support features to the C++ doc tool to document properties that were defined and/or commented in macros, greatly reducing the number of bound properties missing documentation.

Lead Activities Coordinator - DigiPen ProjectFUN

JUNE – AUGUST 2014 & 2015

ProjectFUN summer workshops allow K-12 students to explore things like programming, game design, and art for two weeks.

- Coordinated the design of a tabletop RPG, creating a fun opportunity to foster positive interactions between students.
- Managed a team of 4 coordinators to lead all High School activities after classes.

Education

Bachelor of Science in Computer Science

DECEMBER 2017

DigiPen Institute of Technology

Interesting Projects

- Implemented a Goal-Oriented Action Planning (GOAP) system in C++ for a game project to allow for emergent behavior with simple components. (github.com/Yellowrobe/GOAP-Implementation)
- Created a modular steering behavior system for easy movement behavior generation in a 3D game project.
- Wrote the core of a game engine in C++, utilizing a component-based design to make the engine easy to expand.
- Completed an OpenGL graphics engine and wrote shaders in GLSL for rendering a 2D game.