

# Joshua Shlemmer


## Software Engineer

Experienced in Build Systems and Game Engine Development

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## Skills

### Languages

C++ (Proficient)  
C (Proficient)  
Python (Proficient)  
JavaScript (Familiar)  
PHP (Familiar)

### Technologies

CMake  
Buildbot  
Git  
Phabricator  
Visual Studio

### Platforms

Windows (Proficient)  
Linux (Familiar)  
WebAssembly (Familiar)

### Additional

Game Engine Dev  
Tools Programming  
Build Automation  
Game AI Programming  
Multiplatform Development

## Experience

JANUARY 2018 – SEPTEMBER 2018

### **Software Engineer @ DigiPen R&D – Zero Engine Team (zeroengine.io)**

- Ported the Zero Engine over from a Visual Studio project to a CMake project, allowing for 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](https://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 from bound templated types to allow for proper type information for templates in the code ref and in tooltips to improve type discoverability for users.
- Maintained our Buildbot configuration written in Python to support testing more platforms, learning how to create builds for WebAssembly and Linux in the process, as well as fixing issues in Buildbot's source with Windows platform support.

MARCH 2016 – JANUARY 2018

### **Intern @ DigiPen R&D – Zero Engine Team (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.

JUNE 2014 – AUGUST 2014 AND JUNE 2015 – AUGUST 2015

### **Lead Activities Coordinator @ DigiPen ProjectFUN**

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

## Education

GRADUATED DECEMBER 2017

### **Bachelor of Science in Computer Science** **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](https://github.com/Yellowrobe/GOAP-Implementation))
- Designed a modular steering behavior system for easy movement behavior generation in a 3D game project.