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| Joshua Shlemmer Software Engineer | |  |  | | --- | --- | | 360-471-5399 |  | | joshuashlem@gmail.com |  | | linkedin.com/in/joshua-shlemmer |  | | Joshuashlemmer.com |  | |

Experienced in Build Systems and Game Engine Development

# Skills

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

# Professional Experience

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| Software Engineer - DigiPen R&D – Zero Engine Team | 1/2018 – 9/2018 |

##### 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.

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| Intern - DigiPen R&D – Zero Engine Team | 3/2016 – 1/2018 |

##### 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.

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| Lead Activities Coordinator - DigiPen ProjectFUN | 6/2014 – 8/2014 & 6/2015 – 8/2015 |

##### 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

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| Bachelor of Science in Computer ScienceDigiPen Institute of Technology | 12/2017 |

#### 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.