

Software Engineer

Passionate software developer with knowledge of advanced rendering APIs including OpenGL and Vulkan. 3D mathematics, game engines and hardware systems. Proven experience with team leadership roles.

Multi-language developer. Proven use of software design patterns, architecture, development strategies and unit testing. Proven research experience. Skilled in designing, developing, and maintaining software systems with a focus on building efficient and reliable products. **Areas of expertise include:**

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| • OpenGL, GLSL | • C++ | • 3D Mathematics | • Mobile Dev |
| • Vulkan | • Data Structures | • Physics | • Algorithms |
| • Unreal Engine 4 | • Unity5 & C# | • Java | • JavaScript |

CURRENT PROJECTS

- **OpenGLRenderer, & Vulkan Renderer:**
 - Modern graphics APIs
 - Shadow Mapping
 - Instancing
 - Blinn-Phong Lighting
 - OBJ Model Pre-processing
 - XML Scene Definition

EXPERIENCE

- **Electronic Arts** Burnaby, Canada
Software Engineer: UFC Mobile 2, FIFA Mobile *August 2018 - present*
 - Graphics pipeline development with OpenGL, mobile engine development and maintenance
 - Developed and maintained client application with Haxe and C++
 - Created, led and managed a rendering special interest group for all EA sports mobile
- **JibJab Studios** Marina Del Rey, California
Software Engineer *May 2017 - July 2018*
 - Developed and maintained a render library in both OpenGL and WebGL
 - Spearheaded development and operation of a mass gif rendering system using Java and AWS
 - Implemented shell scripts to automate render tasks using FFMPEG
- **Ocean Networks Canada** Victoria B.C.
Software Engineer *May 2016 - Apr 2017*
 - Developed large scale oceanic data API with JavaEE
 - Performance analysis and optimization
 - Designed and developed user-facing features using Javascript, HTML5 and CSS3.
- **University of Victoria** Victoria B.C.
Teaching Assistant: Embedded Programming *May 2015 - Dec 2016*
 - Instructed laboratory classes on use and development of assembly language programming
- **University of Victoria** Victoria B.C.
Hardware Security Fellow *May 2015 - Dec 2016*
 - Developed a hardware trojan detection application using Java
 - Designed and implemented a prototype of a new homomorphic encryption algorithm using C++.

EDUCATION

- **University of Victoria** Victoria B.C. Canada
Masters of Applied Science in Computer Engineering *May. 2015 - Dec. 2016*
- **University of Victoria** Victoria B.C. Canada
Bachelor of Engineering in Computer Engineering *Sept. 2010 - Apr. 2015*