Nick Houghton
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Software Engineer

Passionate software developer with advanced knowledge of 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:**

- C++17
- 3D Mathematics
- Unreal Engine 4
- OpenGL, WebGL
- Data Structures
- Unity5 & C#
- GLSL
- Physics
- Java
- Vulkan
- Algorithms
- JavaScript

CURRENT PROJECTS AND CONTRACTS

- **Neato Game Engine & Vulkan Renderer (in progress)**:
  - Cross platform game engine.
  - Both OpenGL and Vulkan Renderer
- **On This Spot, historical travel app**:
  - Android, iOS & server development
  - OpenGL/WebGL image blend effect

EXPERIENCE

Electronic Arts — Burnaby, Canada
Software Engineer, FIFA Mobile — *August 2018 - Present*
  - Re-factor of ageing OpenGL ES implementation
  - Developed and maintained client application with Haxe and C++
  - Server Development with Java & Build system maintenance

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 protoype 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*