Nick Houghton
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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:**

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

Current Projects

- **OpenGLRenderer, & Vulkan Renderer**:
  - Modern graphics APIs
  - OBJ Model Pre-processing
- **On This Spot, historical travel app**:
  - Android, iOS & React Native development
  - OpenGL ES

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 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*