Nick Houghton
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Software Engineer

Passionate software developer with advanced knowledge of rendering techniques and tools, 3D mathematics, game engines and hardware systems. AI, game-play and systems programmer. Multi-language developer. Proven use of software design patterns and architecture, development strategies and unit testing. Proven research experience. Proven experience with team leadership roles. Skilled in designing, developing, and maintaining software systems with a focus on building efficient and reliable products. **Areas of expertise include:**

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

Projects

- **Zombie-Hunt: A first person shooter made with OpenGL and C++**:
  - Implemented AI enemies
  - Created a custom renderer
- **Dead Earth: A first person shooter using Unity 5 and C#, Udemy Course**:
  - Implemented AI enemies
  - Achieved blood effects with HLSL shaders

Experience

- **Electronic Arts** — Burnaby, Canada
  Software Engineer, FIFA Mobile — *August 2018 - Present*
  - Developed and maintained client application with Haxe and C++
  - Server Development with Java & Build system maintenance
  - Artwork and content pipeline integration

- **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*