

# Mitchell Hansen

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## Experience

- July 2017 – **Software Developer**, *Espial*, Kirkland, WA.  
Present At Espial I learned how to effectively develop for embedded linux products. This includes bugfixing, reading and understanding legacy C++, automation, and other duties related to maintaining a large hardware/software product. Later in my time at Espial I also was given the opportunity to work on a large cloud SaaS solution which provided cable operators an interface for managing millions of devices.
- June 2016 – **Full Stack Web Developer, Intern**, *Donuts Inc.*, Bellevue, WA.  
Sept. 2016 At Donuts I learned the basics of how software development worked and how Agile development is applied to get effective solutions. I spent the majority of my time writing multiple micro apps using Googles cloud services and Python.

## Education

- 2012–2017 **B.S. in Computer Science**, *Central Washington University*, Ellensburg, WA.  
1990's - **Self-Taught**.  
Present I'm a lifelong learner and love all things tech. I program as a hobby, love learning new things, and am always up for a challenge.

## Skills & Languages

### In depth knowledge / Professional experience.

C++, OpenCL, Python, Linux

### Enough to be dangerous.

Java, SQL, Javascript, HTML & CSS, 3D Graphics, Android, Git / Perforce

### Passing knowledge, enough to sound dangerous.

AWS, Alexa, AppEngine, Bash, Clang, Flask, GCC, GDB,  $\LaTeX$ , OpenGL, Unity3D, Windows, Windows Phone, Zune

### Great grokker.

In the end, programming is programming, it's all really the same. I take pride in my ability to pick up on new tech / languages extremely quickly, and problem solve my way out of difficult situations. I hope that my portfolio / work experience demonstrates this fact more so than just words can convey.

## Portfolio

### **Volumetric Rendering Engine**, *OpenCL, C++, SFML, RayCasting, 3D Math*.

An experimental "From Scratch" volumetric rendering engine utilizing a voxel dataset organized in a sparse voxel octree, Blinn-Phong lighting, dynamic shadowing, texturing, and reflections, along with a TCP streaming Android controller. Presented at the CWU College Of The Sciences fair.

### **Conways Game of Life**, *OpenCL, C++, SFML*.

Completely in-core GPU Conways Game of Life simulator and accompanying RLE decoder.

### **Optimization Algorithms**, *C++, Computer Science Mathematics*.

Implementation of 15 optimization test suite functions, and 9 popular mathematical optimization algorithms.

### **Project Euler**, *Python, Computer Science Mathematics*.

Combinatorics, discrete math, and other logic problems solved using Python.

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