

Mitchell Hansen

Experience

- July 2017 – **Software Developer (Embedded / Full Stack Web)**, *Espial*, Kirkland, WA.
Present At Espial I initially applied my knowledge of embedded products and C/C++ to hunt for bugs in a legacy set-top-box C++ codebase. I also aided in maintenance of the test automation framework for said codebase. I later pivoted to another role in the cloud services team, in which we performed all the engineering required for maintaining and developing a large IPTV SaaS solution. This included bug fixes, feature work, automation (test&build), releases, and if we were unlucky, cm and ops.
- June 2016 – **Full Stack Web Developer, Intern**, *Donuts Inc.*, Bellevue, WA.
Sept. 2016 At Donuts I received a crash course in agile development and general software practices. I had up to this point been a pure C/C++ programmer with occasional spats of C#. Donuts operated on a HTML + python + Google Cloud stack which was completely new for me, and forced me out of my comfort zone. I credit this for strengthening my ability to pivot between languages, frameworks, and environments.

i.e I wrote a bunch of Google Cloud microservices and tools

Education

- 2012–2017 **B.S. in Computer Science**, *Central Washington University*, Ellensburg, WA.
Birth - **Mega-Nerd**.
Present I'm a lifelong learner and a total nerd. I program as a hobby, love learning new things, and am always up for a challenge.

Skills & Languages

In depth knowledge / Professional experience.

C++, Java, Python, OpenCL, Linux, Git / Perforce

Enough to be dangerous.

SQL, Javascript, HTML & CSS, 3D Graphics, Android, AWS, Alexa, Bash, Clang & GCC

Passing knowledge, enough to sound dangerous.

AppEngine, Flask, GDB, L^AT_EX, OpenGL, Unity3D, Windows & Mac

Portfolio

Volumetric Rendering Engine, *OpenCL, C++, SFML, Voxel Ray Marching, 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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