Mitchell Hansen

Experience

Dec 2018 – Present   **Embedded Software Developer**, *Elektrobit*, Bothell, WA.
At my current and lovely company Elektrobit, I am tasked with supporting our Tresos and Corbos implementations of the Autosar automotive standard. This support takes many forms; Dealing with low level debugging of automotive ECU's, from assembly to the OS architecture. Painstakingly fact checking configurations against CPU spec sheets. Or even sprinkling in a little onsite customer support as an Autosar SME.

July 2017 – Dec 2018   **Software Developer (Embedded / Full Stack Web)**, *Espial*, Kirkland, WA.
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 – Sept. 2016   **Full Stack Web Developer, Intern**, *Donuts Inc.*, Bellevue, WA.
At Donuts I wrote bad html/css, and bad javascript. I still write bad html/css/js. I also learned that I'd rather move my career more in the direction of embedded development.

Skills & Languages

In depth knowledge / Professional experience.
C, C++, and their compilers & linkers, Java, Python, Rust, OpenCL, Linux, Git / Perforce / SVN / etc. AUTOSAR, Automotive compilers, debuggers, toolchains

Enough to be dangerous.
Vulkan, OpenGL, SQL, Javascript, HTML & CSS, Android, AWS, Alexa, Bash

Passing knowledge, enough to sound dangerous.
Flask, SVN, GDB, LaTeX, Unity3D, Windows & Mac

Education

2012–2017   **B.S. in Computer Science**, *Central Washington University*, Ellensburg, WA.

Birth - Present   **Mega-Nerd**.
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.

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.

Tracer, *Rust, Vulkan*.
A 2D drawing machine. From pulleys to hardware accelerated image processing.

Conways Game of Life, *OpenCL, C++, SFML*.
Completely in-core GPU Conways Game of Life simulator and accompanying RLE decoder.

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

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