**ETHAN T. BLAKE**

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EDUCATION

**Bachelor of Science in Computer Science** December 2022

Oregon State University GPA: 3.87

**Bachelor of Music in Vocal Performance** May 2018

Arizona State University GPA: 3.84

PROJECTS

**CS344 Smallsh** [GitHub](https://github.com/EthanBlake417/cs344-smallsh)

* Built using C in Linux
* C program that mimics some Bash Shell functionality including ls, <, > pwd, cd, etc.

**AQ6331-Spectrum-Analyzer-GUI** [GitHub](https://github.com/EthanBlake417/AQ331-Spectrum-Analyzer-GUI)

* Built with Python
* Used libraries Tkinter, Pandas, Matplotlib, PyVisa, Multiprocessing, Threading
* This application runs 3 instruments synchronously to test how equipment performs across varied temperature.
* This application plots the data in real time, so that the test can be continuously monitored

**LPF-Coefficient-Optimizer** [GitHub](https://github.com/EthanBlake417/LPF-Coefficient-Optimizer)

* Built with Python, used Multiprocessing to run multiple optimizations simultaneously
* Given a filtering system, I needed to find optimum filter coefficients to fit one sine wave to another.
* This optimizer works by comparing the sum of the absolute value of the differences in two sine waves, adjusting coefficients, and keep the adjusted coefficients if they produce a better result

**Personal Website** [Website](https://www.ethanblake-computerscientist.com/home_page.html) | [GitHub](https://github.com/EthanBlake417/ethanblake-computerscientist)

* Built with Python, Flask, Html5up, and hosted on Vercel

SKILLS

**Languages:** Python, C, C++, HTML, CSS, MASM 32-bit Assembly, JavaScript, SystemVerilog

**Technologies:** PyVISA, Matplotlib, Tkinter, Pandas, Multiprocessing, Numpy, Ctypes, Cuda, OpenCL, Open MP Parallel Programming, Open MPI Parallel Computing, Linux, APIs, Flask, Xilinx Vivado

WORK EXPERIENCE

**Undergraduate Learning Assistant: Data Structures** September 2021 – Present

Oregon State University

* Assist students during office hours, grade homework, and proofread assignment prompts and rubrics
* Developed python style guide for students

**Software Engineer** May 2020 – Present

Grid Evolution Technologies, Scottsdale, AZ

* Write software for optical fiber test equipment
* Utilize PyVisa, Pandas, Tkinter, Matplotlib, and Multiprocessing to connect equipment and display real-time test data
* Leverage Excel and Python to filter and model electrical signals, including signal processing, Kalman noise filtering, and digital automatic gain control

AWARDS

**PSAT National Merit Scholar**