

ETHAN T. BLAKE

ethanblake417@gmail.com • [GitHub.com/EthanBlake417](https://github.com/EthanBlake417)
• [LinkedIn.com/ethan-blake-dev](https://www.linkedin.com/in/ethan-blake-dev) • ethanblake-computerscientist.com

EDUCATION

Bachelor of Science in Computer Science

Oregon State University

December 2022

GPA: 3.91

Bachelor of Music in Vocal Performance

Arizona State University

May 2018

GPA: 3.84

PROJECTS

Grid-Test-GUI

- Developed a Python GUI for controlling various instruments, including a dc power supply, extinction ratio meter, oscilloscope, multimeters, and ovens.
- Implemented synchronous data collection using multiprocessing and threading.
- Enabled live data manipulation, collection, and visualization.

Source-Screen-Calculator

- Development: Utilized Pandas, Numpy, Numba, and Cuda to calculate micrometer-scale light travel.
- Complexity: Addressed an $O(n^4)$ problem due to short distances.
- Scale: Handled calculations for 1000x1000 source and screen arrays, equating to trillions of computations.
- Optimization: Used Cuda for GPU calculations and Numba for CPU parallelization, dividing the tasks.
- Result: Achieved a ~150x speedup, streamlining complex calculations.

CS344 Small-SH

- Created a C program in Linux that mimics some Bash Shell functionality, (e.g., ls, <, >, pwd, cd) for an OSU school project.

[GitHub](#)

LPF-Coefficient-Optimizer

- Developed a Python optimizer to find optimum filter coefficients to fit one sine wave to another.
- Utilized the sum of the absolute value of the differences in two sine waves to adjust coefficients.

[GitHub](#)

Personal Website

- Built a personal website with Python, Flask, Html5up, and hosted it on Vercel

[Website](#) | [GitHub](#)

SKILLS

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

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

WORK EXPERIENCE

Undergraduate Learning Assistant: Data Structures

Oregon State University

September 2021 – December 2022

- Held office hours twice a week for 2 hours.
- Performed 25+ weekly code reviews on student assignments.
- Developed a student python style guide.

Software Engineer

Grid Evolution Technologies, Scottsdale, AZ

May 2020 – Present

- R&D: Constantly write new scripts or UI for emerging problems.
- Application Development: Developing a GUI for a three-phase chassis for Hubbell.
- Software Maintenance: Maintain GUI software for Grid Evolution Technologies and Dynamp.

AWARDS

PSAT National Merit Scholar