Aiden Wenzel

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Education

University of Michigan *Electrical Engineering, BSE* September 2023 - May 2027

- GPA: 3.45/4.00
- Minor, Computer Science and Music

Experience

Coretek *Technical Support Specialist* May 2024 - July 2025

- Worked with HTML, CSS, and C# to develop intuitive ASP.NET UIs.
- Used C# APIs to pull cloud resource information from MS Azure and ticket information from ServiceNow.
- Used KQL to query and summarize cloud resource analytics in Azure dashboards.

Skills

Programming

- Matlab: Organized data, processed images, and plotted data.
- C++: Substantial knowledge of STL. Implemented numerous algorithms and data structures from scratch.
- C: Programmed embedded control systems for autonomous robots.
- Python: Built deep learning models with PyTorch and processed data with Pandas, NumPy, and Matplotlib.
- LaTeX: Wrote elegant, concise lab reports and homework assignments.

Unix

- Worked with Debian-based Linux distributions such as Ubuntu and Mint.
- Familiar with terminal-based text editing using vim.
- Experience with basic terminal utilities such as grep, git, make, and tmux.

Circuit Analysis

- Waveforms: Analyzed analog signals in AC and DC circuits with an Oscilloscope.
- LTspice: Simulated analog circuits.
- Logisim: Simulated digital logic circuits.
- ModelSim: Simulated digital logic circuits using Verilog HDL.

Projects

Fractal Visualizer *C++*

- Utilized OpenGL APIs to accurately visualize the Mandelbrot set and Julia sets.
- Implemented custom panning and zoom functionality for near-infinite zooming into complex geometries.

Conway's Game of Life *C++*

- Wrote custom implementation of Conway's Game of Life using SDL.
- Customized build system and dependency management with CMake.

Instrument Recognition Software *Python*

- Worked with a team of 3 other engineering students to build an instrument recognition app.
- Input audio data would be processed using the Librosa library. Harmonic overtones in audio samples would be extracted using the FFT algorithm.
- Processed audio data would be used to train a CNN which would take audio files as input, process them, and predict what musical instrument is featured in the sample.

Extracurriculars

Michigan Marching Band *Piccolo*

- Dedicated approximately 20 hours each week to rehearsals and performances in the Big House.
- Performed at the Big Ten Championship against the University of Iowa 2023, and the ReliQuest Bowl against the University of Alabama in 2024.
- Initiated as an official brother of Kappa Kappa Psi ($KK\Psi$), the National Honorary Band Fraternity.
- Performed with the Michigan Hockey Band at Yost Ice Arena.