

# Aiden Wenzel

Ann Arbor, MI [wenzel.aiden@outlook.com](mailto:wenzel.aiden@outlook.com) [github.com/aiden-wenzel](https://github.com/aiden-wenzel)

## Education

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### University of Michigan

- Ann Arbor, MI, September 2023 - Present
- Electrical Engineering BSE
- Computer Science and Music Minor

## Experience

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### Coretek

- Farmington, MI, May 2024 - Present
- Gained experience with Microsoft Azure and on-premise server infrastructure.
- Used job knowledge to build my own self hosting game server using port forwarding and DNS.
- Used KQL to query and summarize cloud resource analytics.

## Skills

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### 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.
- L<sup>A</sup>T<sub>E</sub>X: Wrote elegant, concise lab reports and homework assignments.

### Circuit Analysis

- Waveforms: Analyzed analog signals in AC and DC circuits with an Oscilloscope.
- LTSpice: Simulated analog circuits.
- Logisim: Simulated digital logical circuits.
- Modelsim: Simulated digital logical circuits using Verilog HDL.

## Projects

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### 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 a 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.
- Process 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.

## Extra Circulars

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### Michigan Marching Band

- Dedicated approximately 20 hours each week towards rehearsals and performances in the Big House.
- Went to the Big 10 Championship against the University of Iowa 2023, and the ReliQuest Bowl against the University of Alabama 2024.
- Initiated as an official brother of *KKΨ*, the National Honorary Band Fraternity.