

Eric Zhan ♦ *Seattle, WA / Chicago, IL*

erwazhan@gmail.com ♦ (224) 817-0621 ♦ <https://www.linkedin.com/in/erwazhan/>

EDUCATION

Purdue University

Expected May 2027

BS Computer Engineering - GPA 3.34

West Lafayette, IN

Minor: Mathematics

- *Relevant Coursework:* Data Structures & Algorithms, Data Science in Python. Advanced C Programming, MATLAB

PROJECTS

Purdue Forest Products Society (FPS-Purdue)

Technology Lead

- Tasked with building the club website to advertise club products and provide social outreach.
- With this website, the club saw a 78% increase in club viewership and a 34% increase in product sales.
- Developed a website using Python and the Django framework and utilized MySQL as the backend database to manage customer orders.
- Hosting and deployed site through Microsoft Azure, with a Gitlab continuous integration flow.

Vacuum Tube Amplifiers

- Led a team in designing and building vacuum tube amplifiers using KiCad to design schematics and fabricate PCBs.
- Included op-amp and triode gain stages with an adjustable bias to produce harmonic distortion.
- Adjusted frequency response between 68hz and 2359hz to minimize undesirable noise.
- Coded a Arduino microcontroller with C++ to provide digital effects and direct signals.
- Applied waveform transformations and signal processing to create effects such as compression and modulation.
- Eliminated undesirable frequencies and maximized audio quality by creating a multi-level tone stack.

Student Video Behavior Analyst

- Analyzed student video-watching behavior data to predict student test performance and future behavior.
- Utilized Python's Scikit-learn machine learning library to generate AI models.
- Built a k-means model and Gaussian mixture model to find the optimized predictive method.
- Drew conclusions across a wide spectrum of parameters based on different categories of empirical data.

Vehicle Cruise Control Optimization

- Worked with an engineering group to analyze sensor data from cars with adaptive cruise control.
- Reduced up to 15% of error by filtering noise generated by sensors to provide accurate data for analysis.
- Tested multiple sensing configurations by building different sensors to create more precise data.
- Used multiple statistical models to determine optimal levels of driving to optimize consumer comfort.

Personal Portfolio Website

- Used Python and HTML to construct a personal portfolio website to display projects, general activities, and messages.
- Built in the Django web development framework to connect a MySQL database to organize website activity.
- Implemented an API that allowed for communication from viewers through a designated admin panel.
- Hosted the site through the Google Cloud and utilized Google's cloud engine to process data.

PRIOR WORK EXPERIENCE

Sake Sushi and Grill

November 21 – August 23

Assistant Manager/ Team Lead

Lake Zurich, IL

- Assisted with day-to-day operations of the restaurant to ensure a comfortable dining environment.
- Managed server schedules, filled unclaimed shifts, and reallocated workers to busier days.
- Acted as a liaison between management and hourly workers to resolve disputes and ensure thorough communication.

SKILLS

Programming Languages: Python, C, C++, HTML, CSS, MATLAB.

Tools & Libraries: Git, Pandas, NumPy, Matplotlib, Scikit-learn.

Technical Skills: Circuit Design, PCB Design, Electronics