# Christopher Lin

cwlinn@umich.edu

Hillsborough, CA
(650)-495-9480
https://clin155.github.io/portfolio

## Education

**University of Michigan** **Ann Arbor, MI**
*Bachelors of Science in Engineering in Computer Science* *Graduation Date: April 2024*

- GPA: 3.87/4.0
- Relevant Coursework: Data Structures and Algorithms (EECS 281), Web Systems (EECS 485), Computer Vision (EECS 442), Computer Organization (EECS 370), Linear Algebra (Math 214), Statistics and Probability (STATS 412)

## Relevant Experience

**ECSite Inc.** **San Jose, CA**
*Software Intern* *May 2022 - August 2022*

- Built out backend GraphQL APIs for an end-to-end, SASS product for fiber-optic, 5G deployment, testing, and management. APIs included an anomaly detection report generator for fiber tests and a service that decrypted and plotted data from instruments in the field.
- Utilized Docker containers and the Flask framework to host the APIs on AWS ECS (Elastic Container Service) in a microservice architecture.
- Built a React single page application that allowed the customer operations team to perform CRUD (Create, Read, Destroy, Update) operations on a MongoDB database, increasing their productivity when performing demos to potential and current customers.

**Multidisciplinary Design Program - Caterpillar Inc.** **Ann Arbor, MI**
*Student Software Engineer* *January 2022 - Present*

- Developing a statistical data model that accurately predicts customer response to maintenance alerts, used to determine the value of particular alerts and characterize the conditions where alerts deliver the highest savings. Model is developed using pandas and matplotlib.
- Created a dashboard using AWS Quicksight and Tableau to display prediction data and statistics on how this prediction was formed.
- Collaborated with 4 other team members to deliver weekly research and design results to the CAT Digital team.

**Future of Programming Lab** **Ann Arbor, MI**
Undergraduate Researcher September 2022 - Present

- Working as an undergraduate researcher for the Future of Programming Lab under Professor Cryus Omar.
- Contributing to the development of Hazel, a live, functional programming environment for the browser that can run and understand incomplete programs. Use Reason and OCaml functional languages in Hazel's development.
- Currently building a heuristics-based auto-completed suggestions feature such that as the user types, a list of suggestions appear next to the cursor.

**Xerus Systems** **Santa Clara, CA**
*Software Intern* *May 2021 - August 2021*

- Aided in the development of a networking scanning tool for information and security purposes. Network tool included OS detection, host discovery, and TCP/UDP port scanning.
- Addressed compatibility issues for the network tool on the Linux platform in order to port the tool to an IOT hardware device.
- Developed a CLI tool to parse through data from network scans and write it to a SQL database.

## Projects

**Spotify Playlist Manager & Curator** **React, Node.js, MongoDB**

- Constructed a full stack web app for managing spotify playlists using REST API standards.
- App includes web playback and recommendation-based playlist curation based on a set of seed tracks, artists, and genres by leveraging the Spotify Web API. App also includes song bookmarking, the ability to modify and generate playlists, and song playback within the browser.
- Hosted through MongoDB Atlas, AWS Lambda, and Github Pages.

**Instagram Clone** **React, Flask, PostgreSQL**

- Created a full stack web app with an Instagram-like paginated feed, follow/unfollow capabilities, and posts.
- Hosted on Dockerized Containers through AWS EC2, ECR and RDS.

**iOS Social Media App** **Swift, Firebase**

- Created a social media application on iOS specifically for my high school during the Covid-19 pandemic.
- Application includes a news feed, the ability to post photos and text, and search and follow functionality. Hosted using Google's Firebase Realtime Database.

## Leadership

**Eta Kappa Nu - EECS Honors Society** **Ann Arbor, MI**
Activities Officer *June 2022 - Present*

- Organized and deliberated on chapter-wide social events with the purpose of increasing active member attendance and fostering a sense of community within the group of potential candidates for membership. Communicated with other honor societies and EECS-focused organizations in order to hold joint events.
- Mentored a group of potential candidates through balancing membership requirements and academic rigor.

## Skills & Additional Information

- Languages: Python, Javascript, HTML/CSS, C++/C, C#, Swift, SQL, MATLAB
- Tools: React, Node.js, Docker, MongoDB, PostgreSQL, Flask, Pandas, Matplotlib, GraphQL, AWS
- LinkedIn: https://www.linkedin.com/in/christopher-lin-5220a6202/
- Github: https://github.com/clin155/