

David Lin

lindavid1998.github.io/portfolio | lindavid1998@gmail.com

EDUCATION

Georgia Institute of Technology

MS, Computer Science (Machine Learning)

Relevant Coursework: Operating Systems, AI for Robotics, ML for Trading

Expected 2026

GPA: 4.0

University of California, San Diego

BS/MS, Chemical Engineering

2020 - 2021

GPA: 3.9

WORK EXPERIENCE

Illumina (Medical Device Manufacturing)

San Diego, CA

Process Development Engineer II

Jun 2021 – Sep 2024

- Led the maintenance and sustainment of critical processing equipment for a \$44M/wk flagship production line
- Implemented an automated log parsing **Python** script using **Pandas** and **NumPy**, reducing engineering time by 13% and enabling preventive maintenance to avoid revenue-impacting equipment failures
- Integrated the script with **Tableau** to create dynamic visualizations for real-time insight into equipment health
- Utilized **SQL** for extracting manufacturing data to correct yield issues and prevent additional revenue loss from scrap

PROJECTS

Shredders

Repo

- Developed a full stack application to help snowboarders plan trips and identify overlapping trips with friends
- Designed a responsive UI in **Figma** and built it with **React** and **Tailwind CSS**, optimizing for both mobile and desktop
- Implemented **JWT**-based user authentication, social networking, and trip management features such as RSVPs and discussions
- Utilized **PostgreSQL** and **Express/Node** for efficient retrieval and management of user, friend, and trip data
- Deployed the frontend and backend to **Render**, with the database hosted on **Supabase**

AllFields

Repo

- Developed a full stack application inspired by AllTrails for soccer enthusiasts where users can look up soccer fields, post reviews about field conditions, and share images
- Created an interactive and responsive frontend with **React** and **Styled Components**, with filter views and a map display through integration with the Google Maps API
- Utilized **Firebase** for the backend, including Authentication, Realtime Database for data management, and Cloud Storage for images

Machine Learning Financial Trader

- Developed a machine learning trading strategy in **Python** and successfully achieved a 5% return using real stock data
- Built the learner using a random forest classification algorithm to predict optimal trading actions based on labeled data
- Pulled historical data for training and prepared dataset by handling missing values and standardizing before labeling

Multithreaded Server-Client File Transfer

- Designed and developed a server and client using **C** to transfer static files based on a custom HTTP-like protocol
- Implemented multithreading using the POSIX threads library to allow for concurrent processing
- Employed test-driven development practices to ensure code reliability and adherence to project requirements
- Authored comprehensive documentation and a project readme, detailing design choices, implementation strategies, and testing methodologies

SKILLS

Programming: React, JavaScript, HTML/CSS, Tailwind, Express/Node, Jest, Redux, Styled Components, Python, C

Databases: PostgreSQL, Firebase (NoSQL)

Tools: Git, Tableau, Jira, Vite, Postman, Docker, JWT, Figma, PgAdmin

Machine Learning: Pandas, NumPy, CART, Bag Learning, Q Learning, A*, GraphSLAM

Certificates: GTx's Data Structures and Algorithms Professional Certificate