

David Lin

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EDUCATION

Georgia Institute of Technology

MS, Computer Science (Machine Learning)

Expected 2026

GPA: 4.0

University of California, San Diego

MS, Chemical Engineering

2020 - 2021

GPA: 3.86

WORK EXPERIENCE

Illumina (Medical Device Manufacturing)

Process Development Engineer II

San Diego, CA

Jun 2021 – Present

- Implemented an automated log parsing script using **Pandas** and **NumPy**, which led to proactive maintenance that prevented revenue-impacting equipment failures on the flagship product and reduced engineering time by 13%
- 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

- Developed a full stack application to help snowboarders plan trips and identify overlapping trips with friends
- Engaged with potential users to gather and define user requirements
- 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

- 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
- Integrated user profiles with avatar customization, favoriting, and recent activity

Where's Waldo

- Developed an interactive photo-tagging web game based on Where's Waldo
- Integrated **Jest** for comprehensive testing, ensuring robust functionality and minimizing bugs
- Leveraged **React Redux** for centralized state management

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
- Tuned learner and indicator parameters through analysis of performance metrics such as returns and training time

SKILLS

Web: React, HTML/CSS, Tailwind, Express/Node, JWT, Figma, Jest, Styled Components

Databases: PostgreSQL, PgAdmin, Firebase (NoSQL)

Tools: Git, Tableau, Jira, Vite

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