

Sydney Su

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Education

University of California, San Diego

GPA: 4.0

Bachelor of Science: Computer Science

Est Grad: June 2026

- **Coursework:** ML Algorithms, Advanced Data Structures, Probability, Statistics
IP: Deep Reinforcement Learning, AI, NLP, Recommender Systems, Web Mining
- **Activities:** Women in Computing (WIC), Association for Computing Machinery (ACM)

Professional Experience

Machine Learning Researcher

Remote

Algoverse

Jan 2025 - Present

- Enhancing LLM reasoning for diagram generation (TikZ) through GRPO and RL optimization
- Resultant research paper will be published on arXiv, submitted to AI conferences (NeurIPS, EMNLP)

Data Engineer Intern

San Jose, CA

Western Digital

May 2024 - Jan 2025

- Identified ways to improve efficiency while working on thin-film deposition manufacturing team
- Boosted failed batch yield by 99% through real-time detection of faults (alarm triggers which stop the line)
- Data manipulation with SQL and Python, used classifier to determine whether processes are within spec

Projects

Linear Regression Model

[LinearRegression](#) 🔗

- Achieved 100% accuracy in comparison to sklearn LinearRegression model
- Normalized data, used gradient descent, lasso/ridge regularization, adaptive learning rate, and early stop

Neural Network from Scratch

[Neural Network](#) 🔗

- Built a neural network from scratch (only numpy and math) with one hidden layer
- Attained 84% accuracy on handwritten digits (MNIST dataset) improving over baseline of 10%

Breast Cancer Classification

[BreastCancerClass](#) 🔗

- Achieved accuracy of 99% on breast cancer dataset, improving over baseline accuracy of 63%
- Performed exploratory analysis with Seaborn pairplot, z-score normalization, model prediction with SVM

TritonWayfinder (IP)

[TritonWayfinder](#) 🔗

- Led a WIC project team to develop a website which spreads awareness of UCSD's public transport systems
- Created an informative and visually appealing website with usage of HTML, CSS, and JavaScript

BookNexus (IP)

[BookNexus](#) 🔗

- Designed and implemented a robust full-stack bookstore application where users can view, buy, and sell
- Developed RESTful APIs to enable CRUD functionality, leveraging Flask between the dynamic React frontend and the performance optimized PostgreSQL database
- Implementing security through user authentication, error handling, and prevention of SQL injection attacks

Content Creation

[@sydcreates](#) 🔗

- Wrote scripts and recorded progress for YouTube channel which now has 19,000+ views and 300+ subscribers

Skills

Languages: Python, SQL, C++, C, C#, Java, Assembly, HTML, CSS, JavaScript

Technologies: Git, Linux, pandas, numpy, matplotlib, tensorflow, sklearn, Flask, React, PostgreSQL, Docker, Jupyter Lab, Microsoft Suite, Adobe Suite