Ian Cheung

+1 (650) 398-8393 • iancheung@berkeley.edu • iancheung.dev • iancheung0202 • iancheung0202

Education

University of California, Berkeley **Expected Graduation:** May 2028

Applied Mathematics and Data Science, B.A.

Relevant Coursework: Structure and Interpretation of Computer Programs, Foundations of Data Science, Multivariable Calculus, Discrete Mathematics, Linear Algebra*, Data Structures*, Concepts in Computing with Data* *(* work in progress)*

Experience

Bridging Berkeley *Mathematics Mentor* September 2025 – Present

- Provide individualized math support to **20 middle school students** per session during after-school teacher's office hours.

OpenBrackets *Vice President of Education · Python Instructor* April 2023 – April 2025

- Delivered **four 8-week** remote Python programming course to **50+ middle school students** with no prior coding exposure.
- Designed interactive Google Colab notebooks covering programming fundamentals, data structures, and basic algorithms.

Projects

Fischl *(Creator & Lead Developer)* *Discord.py · Flask · Firebase · PostgreSQL · Prometheus · Grafana* February 2022 – Present

- Developed and maintain a custom feature-rich Discord bot serving **250,000+ users** with 99.9% uptime.
- Implemented modular command systems such as ticket management, event coordination, automated queues, and role management.
- Built full-stack **web dashboard** with Flask backend, enabling server admins to view analytics and configure server settings.
- Deployed monitoring infrastructure with Prometheus and Grafana to track performance metrics and ensure reliability.

GunnHacks 11.0 *(Web Developer & Workshop Host)* *React · Vercel* November 2024 – January 2025

- Deployed and maintained official website annual high school hackathon, streamlining logistics and registration for **40+ participants**.
- Hosted **introductory workshop** on web development fundamentals, teaching HTML, CSS, and JavaScript to beginner hackers.

Analysis of California Traffic Collisions *Python · Pandas · NumPy · Scikit-learn* August 2024

- Analyzed **5 million** California collision records using exploratory data analysis and feature engineering techniques.
- Applied machine learning models such as logistic regression and random forests to identify key factors of collision severity.
- Synthesized findings into data-driven policy recommendations for roadway safety improvements to reduce accident rates.

RecycleSorter *HTML · CSS · JavaScript · TensorFlow* January 2023

- Built image processing pipeline using **TensorFlow.js** to distinguish recyclables, compost, and landfill items with **85% accuracy**.
- Awarded **Most Creative Award** at GunnHacks 9.0 for the AI-powered web app to **classify waste** from live camera footage.

Librarian Attendance System *(Chief IT Developer)* *HTML · CSS · JavaScript* September 2021 – May 2022

- Created **automated clock-in system** for La Salle College Library Board, reducing manual spreadsheet data entry time by **90%**.
- Designed **web interface** enabling quick check-in/out using student ID card with timestamp logging and weekly attendance report.

Technical Skills

Languages: Python · JavaScript · TypeScript · HTML · CSS · Java · SQL · Scheme

Frameworks & Libraries: React · Flask · FastAPI · Node.js · Discord.py · Bootstrap · jQuery · SQLite · PostgreSQL · MariaDB

Tools & Infrastructure: Git · Docker · GitHub Actions · Firebase · Vercel · Cloudflare · Linux · Nginx · Prometheus · Grafana

Data Science: TensorFlow · Pandas · NumPy · Scikit-learn · Matplotlib · Seaborn · OpenCV · Jupyter Notebooks · Google Colab