

LEO VILLANI

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EDUCATION

University of California, Berkeley

BA Applied Mathematics and Computer Science *GPA: 3.954*

Berkeley, CA

Aug 2021 - May 2025

Discrete Mathematics - A+, Numerical Analysis - A+, Upper-Division Linear Algebra - A+, Abstract Algebra - A, Number Theory - A+, Mathematical methods for optimization - A+, Real Analysis - A+, Complex Analysis - A, Probability and Random Processes - A, Algorithms - A+, Intro to AI - A

PROJECTS

CalHacks AI Hackathon:

- Wrote a scalable script that asks ChatGPT to take in different tweets in monthly categorized separated folders, classify them by some metric, and then plot the data in a way that works best. For the competition submission, I used GitHub-sourced tweet ids about covid 19 and conducted a sentiment analysis after cleaning the data.

CS61B:

- Gitlet: Implemented a version control system meant to emulate Git implementing features like add, commit, merge, and more.
- BYOW: Implemented an engine for generating explorable worlds. [Extra Credit Presentation](#)

SKILLS

Programming Languages: Python, Java, C, RISC-V, MATLAB, R, SQL, HTML, CSS, Go, Bash, Latex

HIGHLIGHTED EXPERIENCE

UC Berkeley, Department of Mathematics

Researcher

Berkeley, CA

June 2023 - September 2023

- Given liquid crystal coefficients and some error tolerance on them we try to discretize the orientation and corresponding models of them using PDE's.

IBM

Research Intern

New York, NY

June 2020 - August 2020

- Implemented a virus simulator and conducted data analysis to model potential COVID-19 outcomes and examine double-peaking. I then created a presentation and presented to a research team.

UC Berkeley, Department of Machine Learning

Intern

Berkeley, CA

June 2019 - July 2019

- Created a Web crawler to check information from tweet Ids
- Performed data analysis on Twitter data to find half-life of tweets depending on certain variables

ADDITIONAL EXPERIENCE

Wyzant

Tutor

New York, NY

April 2022 - Present

- Preparing students for SAT Math, ACT Math, and AP/college level math classes
- Achieved consistent 5-star rating by building relationships with students and adapting content to meet their learning style

UC Berkeley, Department of Mathematics

Undergraduate GSI

Berkeley, CA

July 2023 - Present

- Leading discussion section, grading, writing, and proctoring exams, and holding office hours

UC Berkeley, Department of Mathematics

Peer Advisor

Berkeley, CA

September 2022 - Present

- Holding office hours, organizing events, and giving academic guidance to freshmen in the math major

AWARDS

Bronze Medal

MathCON

April 2019

Outstanding Graduate Student Instructor (OGSI) Award

UC Berkeley

March 2024