Ethan Li

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Education

UC Berkeley Pursuing a Bachelor of Arts in Data Science & Applied Mathematics   2025-2029
- GPA: 4.0
- Relevant Coursework: UGBA 10X, UGBA 179, Math 52, 53, 54, Econ 2, Stat 20

Troy High School Computer Science & Business Troy Tech Magnet   2021-2025
- Valedictorian out of 642 students in % 2025
- Relevant Coursework: Calculus III, Intro to Linear Algebra, and Differential Equations

Research

Unsupervised Machine Learning Application (Multimodal Decomposition) for the Development of Free T4 Laboratory Reference Intervals
- Published in Thyroid; Presented at ADLM Chicago 2024, used Python to model linear and non-linear regressions

A Missing Peptide Link: A Case Study Involving Detection of an Unusual IGF-1 Protein Form Using High-Resolution Mass Spectrometry
- Presented at ADLM Chicago 2024, used mass spectrometry to investigate novel IGF-1 proteins

Work Experience

LabSoft, Co-Owner   2022-present
- Entered data for COVID-19 patients and organized and automated spreadsheet creation for Sterling Pathology
- Created multiple scripts for the formatting and processing of patient data for Anaheim Community Hospital and Sterling Pathology

MentoScio, Science Lead   2025-present
- Developing and advising on curriculum for Elementary and Middle School Students about genetics and chemistry
- Taught 3 classes simultaneously, leading students through class and guiding office hours, meeting with students

Miran AI, Co-Founder   2025-2025
- Helped design and test voice AI technology that gives students personalized career recommendations.
- Brought product to market and helped raise funding by connecting and meeting with potential investors.

UCLA Pellegrini Lab, Computational Biology Researcher   2024-2025
- Synthesized insights from 400+ WGS studies concerning canine disease to guide genetic research strategy
- Built pipelines transforming raw genomic data into actionable reports for clinicians, marking critical genes

Leadership Experience

Golden Gate Science Olympiad, Event Supervisor   2025-present
- Wrote exams on ecology, communicated with the event writing team on work delegation
- Proctored exams, working with students while grading papers

STEAM for All, Student Council member/Co-director of School Chapters   2023-2025
- Oversaw the renewal and recruitment of school chapters across the United States
- Tripled the number of school chapters during time as director; Planned multiple events promoting school chapter formation

Alliance of Youth Leaders in the United States Fullerton, President & Founder   2022-2025
- Directed 6,000+ volunteer hours, managing logistics, partnerships, and a 20+ member leadership team
- Distributed food to the homeless and ran multiple biology and math classes

Projects

Black-Scholes Volatility Surface Generator and Trading Simulator

- Analyzed pricing in the Black-Scholes Equation and implemented pricing for calls, puts, and the Greeks
- Implemented Newton-Raphson's method to find implied volatility and plotted volatility surfaces
- Created an option trading simulator, simulates long and short calls and puts and gives information on the trades

SARS-CoV-2 Gene Analyzer and Levey-Jennings Graph Generator

- Created an application identifying patients with a high likelihood of a positive test using pandas, numpy, and tkinter
- Outputted Levey-Jennings Graphs with SARS-CoV-2 gene, comparing gene frequencies to their averages

NGS Secondary Analysis Pipeline Bash Script

- Created an NGS Secondary Analysis Script that took in UCLA's canine genomic data and returned labeled VCF files
- Worked with Professor Pellegrini to adapt the script to the lab's needs and improve the sensitivity of indels found

Skills & Interests

Programming: Python, pandas, NumPy, Linux, Matplotlib, LaTeX, Bash, regression modeling, unsupervised learning, Java

Bioinformatics: NGS pipelines, FastQC, Cutadapt, BWA, GatK, Samtools, snpEff, Picard

Wet Lab Skills: PCR, Gel Electrophoresis, Mass spectrometry, Pipetting, Titrations, Gravimetric analysis

Interests: Golf, Basketball, Football, Financial Derivatives, Accounting, Baking, Cooking, Trivia, Music

Awards

Berkeley Big Dreams Scholarship

USABO (United States of America Biology Olympiad) Semifinalist   2023, 2024

- Scored within the top 2% of the ~10,000 students in the United States in the foremost biology competition in the US

Science Olympiad Medals   2023, 2024

- Won first place in Disease Detectives, Microbe Mission, Ecology, and Forensics at a national level and at MIT

Presidential Service Gold   2022- 2024

- Volunteered 600+ hours, focusing on equity in early childhood education and food distribution

USMDO (United States Medicine and Disease Olympiad) Bronze Medalist   2023

- Scored in the top 6% among 1235 students internationally, tested on Cell Biology and Human Physiology

Coursework

UC Berkeley

- UGBA 10X (Foundations of Business)
- UGBA 179 (International Consulting for Small and Medium-Sized Enterprises)
- Math 52 (Calculus II)
- Math 54 (Linear Algebra & Differential Equations)
- Econ 2 (Introduction to Economics)
- Stat 20 (Introduction to Probability and Statistics)
- NUSCTX 10S (Introduction to Human Nutrition: Managing Life)
- Music 30 (Computational Creativity for Music and the Arts)

Troy High School

- Calculus III (Multivariable Calculus)

Testing

SAT: 1540

AP Biology: 5

AP English Literature and Composition: 5

AP Statistics: 5

AP Calculus BC: 5

AP Chemistry: 5

AP Computer Science A: 5