Mohamed Emrie Loh

+1(510)-973-9596 | emrieloh53@berkeley.edu | https://www.linkedin.com/in/emrie-loh/

Education

University of California – Berkeley, USA *Dec 2025 (expected)*
Bachelor of Arts in Data Science – Domain Emphasis in Cognition

- **GPA**: 3.96/4.00
- **Honors and Awards**: Magna Cum Laude; 5x Honors to Date; 2x Dean's List; 2x Rubin Lerman Scholarship; The Leadership Award; The National Society of Leadership and Success; Davis UWC Scholarship; Data Science Education Program Award
- **Relevant Coursework**: Principles and Techniques of Data Science; Data Engineering; Data Structures; Data, Inference, and Decisions, Discrete Mathematics and Probability Theory; Linear Algebra and Differential Equations; Artificial Intelligence; Machine Learning; Advanced Programming in R; Basic Issues in Cognition; Brain, Mind, and Behavior; Microeconomics; Financial Information Analysis & Valuation; Financial Economics
- **Study Abroad**: Fall Semester 2024 – The University of Sydney, Australia

Professional Qualifications:

- Training the Street: Discounted Cash Flow Valuation *Jun 2025*
- Kaggle: Deep Learning Certification *Feb 2024*
- Stanford: Machine Learning Certification *Oct 2021*
- University College London: Emerging Topics in Integrated Machine Learning *Mar 2021*
- Kaggle: Machine Learning Certification *Jul 2020*

Professional Experience

UC Berkeley – College of Computing, Data Science, and Society *Berkeley, USA*
Lead Teaching Assistant (Course Content Lead) *Aug 2025 – Present*

- Led a team of 5 other course staff members in the development of all student-facing course content, including 12 homework assignments, 13 jupyter notebook labs, 14 discussion worksheets, and 11 tutoring worksheets, for the largest upper-division undergraduate course (Data C100) with over 1,000 students enrolled.
- Co-lectured the SQL lecture for Data C100 in the largest lecture hall in UC Berkeley
- Hosted Mega-Discussion sections in a lecture hall for over 200 students, lecturing on core Data Science concepts.
- Co-authored course content notes and debugging guides for additional student support.

Teaching Assistant (Course Content Team Member) *Jan 2025 – May 2025*

- Taught and lectured classes of up to 50 students and also provided 1-on-1 tutoring and support for students.
- Worked with 5 UCS2s to upgrade 80% of outdated Data C100 assignments.
- Mentored and coached over 20 UCS1s (tutors) on how to effectively teach students.

Tutor (Course Content Team Member) *Jan 2024 – May 2024*

- Piloted the development of a new organizational role to address gaps in providing students with support.
- Worked in a team to review course content that adequately assessed student understanding.

MyRISK – HyperGRC *Sydney, Australia*
Data Science Researcher *Jul 2024 – Nov 2024*

- Explored risk quantification methodologies and proposed Generative AI solutions for cyber risk analysis.
- Built a risk quantification RAG-based Large Language Model using Langchain, Cohere AI and 30+ industry research reports to calculate a company's cyber risk profile.
- Researched and tested various vector stores, embedding models, retrievers, and reranking models to optimize performance of LLM pipeline as part of an Australian Government Research and Development Grant.
- Authored 3 separate internal research documents on prompt engineering and LLM design to help speed up the onboarding process for future interns by 2x.

UpSync Consulting – University Consulting Organization *Berkeley, USA*
Consultant *Aug 2022 – Dec 2022*

- Worked in a project team tasked to reduce rate of returns on Patagonia's e-commerce platform.
- Conducted competitor analysis and researched various approaches to improve usability and customer satisfaction.
- Experimented with visual AI solutions and tested UI/UX methods to improve customer confidence on size and fit.
- Presented recommendations to Patagonia management that would reduce the rate of returns by 30%.

Aspirasi – Largest Fintech in Malaysia *Kuala Lumpur, Malaysia*
Strategy & Data Science Intern *Jun 2021 – Jul 2021*

- Designed a pitch deck for partnership with a leading bank in Malaysia to provide 0-interest products to SMEs.
- Spearheaded the development of a credit-scoring model using the company's largest data source of 96,000 data points, resulting in a logistic regression with specificity ~90% and an AUC ROC of ~0.75.
- Researched and implemented gradient boosting algorithms and feature engineering techniques to improve model performance by ~30%.
- Integrated machine learning algorithms into credit-scoring engine to provide over 11,000 micro-SMEs in Malaysia as part of a government-backed Covid-19 relief plan.

RESEARCH EXPERIENCE

UC Berkeley – College of Computing, Data Science, and Society *Berkeley, USA*
Undergraduate Researcher *Aug 2025 – Dec 2025*
Advisor: Professor Joshua D. Grossman

- Led research on an investigation into open-ended generative-AI assignments in Data Science classes.
- Designed and implemented the entire research methodology then collected and analyzed student and staff perception of these new assignments.
- Presented findings as the sole undergraduate speaker at a global Gen-AI research symposium.

University of Toronto – School of Cities *Toronto, Canada*
Student Researcher *Jun 2025 – Dec 2025*
Advisor: Professor Karen Chapple

- Performed cluster analysis on over 50 million records of census and built environment data to identify urban development trends in transit station areas across Canada for a government-led urban planning research project.
- Extracted, transformed, analyzed, and visualized 'cuebiq' cellphone data, with over 10 billion records, to track commute trends along the Canada/US border and in Canada/US downtown areas.
- Worked in a team to develop a Large Language Model for anti-displacement housing ordinances in California.

UC Berkeley – Data Discovery Program *Berkeley, USA*
Undergraduate Researcher *Aug 2023 – Dec 2023*
Advisor: Dr. Marco Maurizi

- Collaborated with 6 researchers to build graph, recurrent, and convolutional neural networks for predicting stress response of 1 million lattice structures as part of University research project.
- Optimized model using cloud computing and automated hyperparameter tuning to reduce average loss by 4x.
- Presented and defended findings at a cross-faculty research symposium with over 100 attendees.

TECHNICAL SKILLS

Advanced: Python, R, SQL, Pandas, Numpy, Java, Scikit-learn, Probability, Statistics, Machine Learning, Large Language Models (LLMs), Langchain, RAG
Intermediate: PHP, HTML, CSS, Deep Learning, Neural Networks

PROJECTS

Build your own World – Built a game in Java that randomly generates an interactive world where a user has to complete simple tasks to win. Game includes a home page, implemented save and load functionality, and randomization.

Spam Emails – Built a logistic regression model using scikit-learn that classified spam emails with a total test accuracy of 0.898. Performed feature engineering techniques to convert the text data into 14 features for the model and implemented GridSearchCV hyperparameter tuning to find optimal hyperparameters.

Housing Prices – Built a linear regression model using scikit-learn that predicted the sale price of a house with a test root mean squared error of 200,000. Performed feature engineering to produce 15 features for the model

Covid-19 DNA Strands – Led a group of 5 high school students to build a logistic regression model using biopython, scikit-learn that predicted the location of different Covid-19 DNA strands with a specificity of ~80%.

Covid-19 Office Scheduler – Built a web application using PHP, HTML, CSS, and SQL to help the company rotate 4 different teams in and out of the office during Covid-19 "movement control order". Web app included a login page, different access for different accounts, and an algorithm that automatically updates based Covid-19 cases.

Leadership Experience

UC Berkeley Intramural Basketball *Berkeley, CA*
Team Captain *Aug 2022 – Present*

- Captained the team to the division championship and promotion to a higher division.
- Developed strategic plans and customized game plays to increase chances of winning.
- Spearheaded club expansion programme resulting in 2x increase in membership.

Inspirit AI – High School AI Program *Online*
Research Lead & AI Scholar *Jun 2021 – Sep 2021*

- Led a research team to build an AI-based model that could predict the spread of Covid-19 variants.
- Published an article on how different avenues of AI research.

Math Ambassadors – High School Math Support Program *Singapore*
Technology Leader & Mentor *Aug 2020 – Aug 2021*

- Led the design and development of an online platform for students to access resources and receive support.
- Produced instructional videos on Math concepts and walkthroughs on International Baccalaureate Math problems.

Additional Information

Other Research Projects & Papers: Conversational AI in Mental Health (2024); Natural Language Processing in Psychiatry (2022); Uses of AI and What You Can Do (2021); Covid-19 SME Relief Fund (2021)

Languages: English (fluent), Mandarin (intermediate), German (beginner)

Other Skills: Public Speaking, Visualization/Slide Design, Attention to Detail

Other Interests: Star Wars, Hiking, Ancient European History, Neuroscience, Baking, Logic Games, Poker