

Joshua Lim

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EDUCATION

University of California, Los Angeles (UCLA)

B.S. Applied Mathematics, Statistics and Data Science

- GPA: 4.0

Los Angeles, CA

June 2024

RESEARCH INTERESTS

Graphical Models, Monte Carlo Methods, Causal Inference, Biostatistics, Time Series

RESEARCH EXPERIENCE

Qing Zhou Research Group

Undergraduate Researcher

Los Angeles, CA

February 2023 - Present

- Researched structure learning of causal DAGs under the guidance of Professor and Department Chair Qing Zhou
- Furthered the development of the CML algorithm, created by Ph.D. student Stephen Smith, by adding in conditional independence tests and other procedures for discrete data
- Verified algorithm by generating datasets from the parameters provided by the Bnlearn repository and performing simulation studies on the Hoffman2 Cluster
- Implementation done in Rcpp, Rcpp Armadillo, and R

Stanford School of Medicine - Sean N. Parker Center for Allergy and Asthma Research

Biostatistics Researcher

Stanford, CA

June 2022 - May 2023

- Implemented statistical analysis in R to analyze patients with chronic GI symptoms in oral immunotherapy clinical trials
- First authored abstract and poster submission to the 2023 American Academy of Allergy, Asthma & Immunology conference and second authored poster submission to GALEN Anacare GAFA
- Generated machine learning models to automatically convert CTCAE, Bock, and CoFAR 1 allergic reaction grades to a CoFAR 3 grade
- Developed interactive R shiny application displaying patient enrollment, demographic, and forecast data. Used by researchers to provide summaries to the NIH

Directed Research in Time Series

UCLA Stats 199

January 2022 - May 2022

- Researched time series and their applications under the guidance of Professor Michael Tsiang
- Particular emphasis on Autoregressive Integrated Moving Average (ARIMA) Models and their use in capturing and forecasting seasonal data
- Constructed ARIMA models analyzing various pop-culture data sets including Disney Movies, Pokémon Base Stat Total, and Naruto Episode Ratings
- Presented findings at UCLA Undergraduate Research Week

PUBLICATIONS

- Lim, J., Cao S., Chinthrajah S., Sindher S. “The Impact of Persistent Gastrointestinal Symptoms on Completion of Oral Immunotherapy in Clinical Trials.” *Journal of Allergy and Clinical Immunology*, vol. 151, no. 2, 2023, <https://doi.org/10.1016/j.jaci.2022.12.110>.

POSTERS AND PRESENTATIONS

- **Persistent gastrointestinal symptoms do not impact oral immunotherapy completion** February 2023
2023 AAAAI Annual Meeting
- **The impact of persistent gastrointestinal symptoms on completion of oral immunotherapy in clinical trials** September 2022
GALEN Anacare GAFA 2022
- **Using ARIMA Models to Analyze and Predict Trends Across the Nine Generations of the Pokémon Universe** May 2022
UCLA Undergraduate Research Week 2022

TEACHING EXPERIENCE

University of California, Los Angeles (UCLA), Department of Statistics and Data Science

Learning Assistant

Los Angeles, CA

March 2024 - June 2024

- To serve as a learning assistant for Stats 102B: Computation and Optimization for Statistics

Math Speeder Upper Course (MSUC)

Instructor and Curriculum Designer

June 2021 - August 2021

- Created a fully online introductory multivariable calculus course, featuring 22 online lectures, homework assignments, solutions, as well as a handful of quizzes, two midterms, three projects, and a final exam
- Welcomed 10 students in the first cohort, with several new students referencing the now fully asynchronous class every year
- Intended to be accessible by any student, regardless of background or socioeconomic status

Menlo School

Teaching Assistant

Atherton, CA

August 2020 - June 2021

- Assisted in the online, hybrid, and in-person learning formats for AP Statistics and AP Calculus BC
- Created test questions, offered help during and after school hours, and led classroom activities
- Increased classroom productivity by facilitating problem solving sessions with immediate feedback

Physics Catcher Upper Course

Instructor and Curriculum Designer

June 2020 - August 2020

- Created a fully online introductory physics course, featuring 17 online lectures, homework assignments, and answer keys, as well as a midterm and final exam

Tutor

June 2019 - Present

- Taught 14 middle school to college-age students for over four years in mathematics, statistics, and physics

LEADERSHIP AND SERVICE

UCLA Club Gymnastics President

August 2022 - Present

- Served as the president for a nationally-ranked and recognized club gymnastics team of over 60 members
- Organized meetings, UCLA competitions, and travel meets, communicated with governing bodies, registered for competitions, fundraised, and more

UCLA Volleyball Ball Boy

April 2022 - Present

- Volunteered as a ball boy for UCLA Women's Volleyball and UCLA Men's Volleyball, working alongside Pauley Pavilion event staff to ensure each game operated smoothly

Teens Exploring Technology Volunteer Recruiter

September 2022 - December 2022

- Recruited professionals in industry to help mentor students from underserved communities for Teens Exploring Tehcnology's annual hackathon

MenloHacks 2021 Puzzle Creator

January 2021-March 2021

- Created an online escape-room for a high-school hackathon featuring Navajo Code, ciphers, stenography, and more

TECHNICAL SKILLS

- R, Rcpp, R shiny, R Markdown, C++, MATLAB, Java, Python, Git

AWARDS

- **Dean's Honor List (Fall 2020 - Spring 2023)**

December 2020 - Present

Awarded to students achieving a 3.9 GPA or above on at least 12 units

- **NAIGC MAG Developmental Floor Exercise National Champion**

April 2022

First place Men's Artistic Gymnastics Developmental Floor Exercise at the 2022 NAIGC National Gymnastics Championships

- **NAIGC WAG Level 9 Floor Exercise National Champion Runner Up**

March 2023

Second place Community Women's Artistic Gymnastics Level 9 Floor Exercise at the 2023 NAIGC National Gymnastics Championships

REFERENCES

Qing Zhou, Ph.D.

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Clinical Associate Professor, Pediatrics - Allergy and Clinical Immunology
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