

# Sophia Yi

Los Angeles, CA | 661-713-1539 | [sophiayi@g.ucla.edu](mailto:sophiayi@g.ucla.edu) | <https://www.linkedin.com/in/yi-sophia/>

## EDUCATION

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### University of California, Los Angeles

September 2022 - June 2026

*Bachelor of Science in Statistics & Data Science, Bachelor of Arts in Spanish*

*Los Angeles, CA*

- *Publications:*

- \* English to Spanish Translation: Transformar los datos en empatía: cómo reinventé mi pasión en UCLA, Division of Physical Sciences, 2024
- \* Coordinating for Clicks: Learning in Multi-Agent Information Asymmetric Cascading Bandits, Department of Applied Math, 2025
- \* IN REVIEW: Robust Multi-Agent Bandits with Heavy-Tailed Rewards and Information Asymmetry, Department of Applied Math, 2025

- *Relevant Coursework:* Optimization, Mathematical Probability, Computational Statistics with R, Causal Inference, Linear Models, Statistical Models and Data Mining, Spanish Linguistics and Cognition

## EXPERIENCE

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### Data Analyst Intern - Transportation Consulting

Summer 2025

*LSY Enterprise*

*Santa Clarita, CA*

- Analyzed six years of collision data to identify trends and high-risk patterns at major intersections for the City of Oxnard and City of Ojai
- Supported the development of a Local Road Safety Plan (LRSP) by compiling, cleaning, and visualizing crash data for data-driven decision making
- Collaborated with senior analysts and engineers to deliver insights used in roadway safety improvements

### Machine Learning Undergraduate Researcher

October 2024 – Present

*UCLA Department of Applied Mathematics*

*Los Angeles, CA*

- Advance theoretical modeling in multi-agent systems by enhancing the cascading bandit framework under asymmetric information; research submitted to the *Journal of Machine Learning*
- Strengthen project direction by synthesizing insights from over 20 reinforcement learning publications, shaping analytical approach and experimental validation

### Volunteer Teacher

June 2024 - Present

*GM Disability Ministry*

*Sun Valley, CA*

- Teach and support individuals aged 6-40 with disabilities in a weekly faith-based classroom setting, adapting lessons to meet diverse learning and behavioral needs
- Develop individualized teaching approaches for students with autism and Down syndrome in a one-on-one classroom setting

### Content and Narrative Design Intern, Spanish

June 2024 - October 2024

*LingoHero*

*Remote*

- Drove storyboarding progress by collaborating cross-functionally with artists and UI/UX designers, using Figma to craft engaging, culturally relevant user experiences
- Shaped Spanish-language curriculum by designing culturally informed lesson plans and narratives, enhancing app authenticity and learner engagement in the Mexican culture track

### Undergraduate Research Assistant

April 2024 – June 2024

*UCLA Department of Mathematics*

*Los Angeles, CA*

- Spearheaded an independent research project under PhD mentorship, applying advanced concepts in probability and machine learning to develop original coursework and discussion material
- Delivered findings to an audience of graduate students and faculty, sharpening presentation skills and deepening domain knowledge through academic feedback

## SKILLS

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**Programming Languages:** R, Java, Python, Javascript, HTML/CSS

**Tools/Technologies:** React, Node.js, Matplotlib, Git, Visual Studio Code, Microsoft Office Suite, Tableau, Overleaf

**Concepts:** Neural Networks, Regression Modeling, Generalized Linear Models, Model Diagnostics, Bootstrapping, Simulation, A/B Testing, Statistical Visualization, Experimental Design, Numerical Optimization