WEILING LUO

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EDUCATION

University of California, Los Angeles (UCLA) *Los Angeles, CA*
B.S Statistics & Data Science Expected: June 2026

- Relevant Coursework: Data Structures in C++, R Programming, Probability, Computational Statistics, Data Analysis & Regression, Mathematical Statistics, Linear Models, Variable Topics in Communication Technology and Digital Systems

De Anza College *Los Angeles, CA*
Economic and Computer Science Sept 2022 - June 2024

- Relevant Coursework: Principles of Macroeconomics, Financial Accounting, Programming in C++, Java, and Python, Calculus, Differential Equations, Linear Algebra

WORK EXPERIENCE

Little Dreamer / Little Sprouts / Little Pine tree Daycare *Sunnyvale, CA*
DayCare Teacher Summer 2022 , 2022, 2023

- Supervised and engaged children ages 1 month–3 years in play-based learning to support cognitive and social growth.
- Maintained a safe, nurturing environment and communicated with parents to ensure consistent care and development.

PROJECTS

Housing Price Prediction (STAT 101A Course Project) Winter 2025

- Built and optimized multiple linear regression models in R to predict unit-area house prices in Taiwan using factors such as age, proximity to MRT, and location.
- Applied log transformation and addressed multicollinearity; improved model R^2 from 0.58 to 0.72 and interpreted geographic and time-based price trends.

ASA DataFest 2025 – Commercial Real Estate Analytics Spring 2025

- Analyzed 200K+ commercial lease records (2018–2024) from Savills to identify post-COVID leasing trends in Manhattan's financial sector.
- Discovered geographic clusters of high-demand Class-A office space and recommended space optimization strategies under hybrid work models.

The Modulatory Effects of Music Genre and Exposure Duration on Cognitive Focus (STAT 101B Final Project). Spring 2025

- Conducted a two-factor ANOVA with blocking (age and gender) to evaluate how music genre (classical, country, dance, heavy metal) and listening duration (10–30 minutes) affect attention.
- Designed the experimental framework, cleaned and analyzed 216 participant records in R, and visualized interactions between factors using ggplot2.
- Found statistically significant main and interaction effects ($p < 0.05$); heavy metal and longer exposure were linked to reduced focus, while classical, country, and dance music maintained attention.

Lasso Regression and Federated Learning (STAT 102B Final Project) Spring 2025

- Implemented coordinate descent for Lasso regression to select optimal regularization parameters and minimize validation loss across multiple datasets.
- Developed a federated Lasso framework for distributed data analysis, aggregating model parameters across nodes to improve generalization and privacy.
- Evaluated predictive performance on test data and visualized convergence patterns and coefficient shrinkage effects.

Australia Bushfires Digital Humanities Project (Digital Humanities 101 Final Project) Summer 2025

- Created a web-based mini-site analyzing the 2019–2020 Australian bushfires using NASA and MODIS fire archive data.
- Developed interactive visualizations, including a timeline, geospatial map, and statistical charts, to explore wildfire frequency, intensity, and human impact.
- Wrote the project narrative, data critique, and visualization analyses, connecting data-driven findings to environmental and social implications.

TECHNICAL SKILLS

Languages: R, Python, C++, Java
Platforms: Tableau, Microsoft Excel