

Yi Luo

Mathematics, Economics & Data Science

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SUMMARY

Data-driven professional combining mathematics, economics, and data science. Experienced building multi-year datasets, applying statistical/ML models, and visualizing results to inform research and policy. Strong with R, Python, Stata; clear communicator and collaborator.

EXPERIENCE

Research Assistant 01/2025 – 05/2025 — Easton, PA
Lafayette College (Advisor: Sayorn Chin)

- Collected, cleaned, and merged multi-source datasets (state, race, sex, county) using Stata to build a harmonized panel for 2000–2023.
- Designed and produced visualizations showing county-level heart disease death rate trends across time and demographic groups.
- Conducted descriptive and summary statistics in Stata (by age, sex, race) to reveal disparities in mortality patterns across cities and counties.

Research Assistant 12/2024 – 07/2025 — Remote
Columbia University (Advisor: J. Yang)

- Cleaned, imputed, and visualized datasets; engineered features.
- Trained models (scikit-learn, TensorFlow); evaluated accuracy/precision/F1.
- Co-authored paper summarizing empirical results.

Financial Analyst Assistant Summer 2023 — Beijing, China
China Galaxy Securities Co., Ltd.

- Assisted with ETF and other financial product analysis.
- Coordinated data & reports supporting investment decisions.

SELECTED PROJECTS

Decision Trees vs. Random Forests 01/2025–05/2025

- Benchmarks on resort & income data; RF more accurate/stable.

Election Campaign Projections (Python) 09/2024–12/2024

- Identified swing states; visualized trends (Pandas/Matplotlib).

Urban Heat Island Analysis (R) 09/2024–12/2024

- Buffers & building density; day/night temperature contrasts (Chicago, Berlin).

Tumor Growth Modeling 01/2024–05/2024

- Gompertz vs. Logistic; Gompertz best fit (RSS, growth curves).

Cancer Risk & Early Smoking 01/2024–05/2024

- Logistic model with intensity/age/education; early-intervention note.

Lion & Hyena Population Dynamics (R) 01/2024–05/2024

- Modeled single- and dual-species population dynamics in R.
- Analyzed coexistence, competition, and extinction outcomes in Maasai Mara Reserve.

Economic Indicator Analysis (Iowa) 09/2023–12/2023

- Explored Iowa economic indicators with EDA, missing value imputation, and feature selection.
- Built linear regression models; validated with RMSE, R^2 , and ANOVA F-test.

SKILLS

Data analysis

Statistical modeling

Econometrics

Machine learning

Forecasting

Data visualization

Regression analysis

CODING LANGUAGES

R★★★★★

Python★★★★★

Stata★★★★☆

MATLAB★★★★☆

LaTeX★★★★★

INTERESTS

Sanda (4 yrs; competitions)
Skiing (6 yrs; pursuing coach cert.)
Basketball — middle/high school team captain & tactics lead
Chinese Chess — 6 yrs consecutive competitions (primary school)
Orchestra — 3 yrs; percussionist (drums)

EDUCATION

B.A. in Mathematics & Economics (Minor: Data Science) 09/2022 – 12/2025 — Easton, PA
Lafayette College
GPA: 3.50/4.00 Major: 3.54 Minor: 3.77