



Yuanzhe Liu

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EDUCATION

- **University of California, Santa Barbara** 2019-2025 June (Expected)
Economics, Ph.D.
Advisor: [Prof. Peter Rupert](#) (Chair)
- **University of Wisconsin-Madison** 2017-2019
Econometrics and Quantitative Economics, Master
- **Rochester Institute of Technology** 2014-2017
Computational Mathematics and Economics, BS

RESEARCH INTEREST AND SKILLS

Research Interest: Macroeconomics, Bayesian statistics, Deep Reinforcement Learning

Programming Language and Software: Python, R, C++, SQL, Matlab, PyTorch

Other: CFA Level 1

SELECTED WORKS

Solving and Estimating Heterogeneous Agent Model Using Reinforcement and Machine Learning (Job Market Paper)

- Applied Reinforcement Learning to solve high-dimensional heterogeneous agent models, achieving a global solution.
- Demonstrated that the DRL method enables counterfactual analysis, which is not achievable with traditional methods.
- Integrated the novel DRL solution method with amortized likelihood-free Bayesian inference.

Working from Home, Household Production, and Durable Good Consumption

presented at SEA 2023, EGSC at WUSTL, AEA 2024 poster

- Developed a household production model incorporating remote work and estimated it using Bayesian and Kalman Smoother.
- Remote work accounts for up to one-third of the increase in durable goods consumption, while the substitution between nondurable and durable goods accounts for another one-third.

Medical Expenses, Uncertainty and Mortgage Applications (*Under Review*)

coauthored with *Fanyu Liu, Kerui Geng*

- The ACA reform increased health insurance coverage rates among low-income households and reduced large-scale medical expenditures and mortgage delinquency rates.

The Effect of Trucking industry Deregulation on Truck Drivers' Wage (Best second year paper UW-Madison)

- Utilized a difference-in-differences specification to identify the effect of intrastate trucking industry deregulation on the trucking market and the wages of for-hire sector drivers, revealing a negative effect on wages.
- Deregulation intensified competition and eliminated redundant capacity by forcing a big proportion of companies out of business. Truck driver's wage decreased because of the decrease in demand for drivers.

CONFERENCE AND SEMINAR PRESENTATIONS (INCLUDING SCHEDULED)

2024: American Economic Association Annual Meeting (Poster)

2023: Southern Economic Association 93rd, Economics Graduate Student Conference at Washington University in St. Louis

HONORS, SCHOLARSHIPS

2023-2024 Research quarter fellowship, Travel Grant

2017-2019 Best Second year paper UW-Madison

2014-2017 Dean's List, Cum Laude, International Student Scholarship

REFERENCES

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