Jizhou Liu

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Areas of Research

Causal Inference, Design and Analysis of Randomized Experiments, Reinforcement Learning

Education

Ph.D. Econometrics and Statistics, The University of Chicago Booth School of Business, 2020-

- Advisors: Christian Hansen and Azeem Shaikh

M.S. Management Science and Engineering, Stanford University, 2018-2020

MPhil Economic Research (with Distinction), University of Cambridge, 2017-2018

B.A. Farsi, Beijing Foreign Studies University, 2013-2017

Research

Publications and Forthcoming Papers

Inference for Matched Tuples and Fully Blocked Factorial Designs (with Yuehao Bai and Max Tabord-Meehan), *Quantitative Economics* 15(2), 279–330.

Revisiting the Analysis of Matched Pair and Stratified Experimental Designs in the Presence of Attrition (with Yuehao Bai, Meng Hsuan Hsieh, and Max Tabord-Meehan), *Journal of Applied Econometrics* 39(2), 256–268.

Proximal Causal Inference for Synthetic Control with Surrogates (with Eric J. Tchetgen Tchetgen and Carlos Varjão), *The 27th International Conference on Artificial Intelligence and Statistics (AISTATS), 2024*

Learning Intuitive Policies Using Action Features (with Mingwei Ma, Samuel Sokota, Max Kleiman-Weiner, Jakob Foerster), *International Conference on Machine Learning (ICML), 2023*

Working Papers

Inference in Cluster Randomized Trials with Matched Pairs (with Yuehao Bai, Azeem Shaikh and Max Tabord-Meehan), revision requested at *Journal of Econometrics*

Inference for Two-stage Experiments under Covariate-Adaptive Randomization, revision requested at *Journal of Econometrics*

On the Efficiency of Finely Stratified Experiments (with Yuehao Bai, Azeem Shaikh and Max Tabord-Meehan)

Efficient Treatment Effect Estimation in Observational Studies under Heterogeneous Partial Interference (with Zhaonan Qu, Ruoxuan Xiong and Guido Imbens)

Professional Experience

Tower Research Capital, Quantitative Trader Intern, May 2023 - Nov 2023

- Developed an intraday statistical arbitrage strategy by integrating Ravenpack and market data.
- Developed deep learning models boosting HFT strategies by 30%-60% in Japanese and US equity markets.

Amazon.com Inc, Applied Scientist Intern, Jun 2022 - Sep 2022

- Supervisor: Eric Tchetgen Tchetgen
- Conducted research on synthetic control methods.

Facebook AI Research, Student Researcher, Jun 2021 - Sep 2021

- Supervisor: Jakob Foerster
- Conducted research on multi-agent deep reinforcement learning and developed attention based neural network models to improve cross-play performance in Hanabi game.

Awards

2022, Amazon Graduate Fellowship

2021, Katherine Dusak Miller PhD Fellowship, Booth School of Business, University of Chicago

2018, Cambridge Trust Scholarship, University of Cambridge

2016, "Research on Chinese economy" Scholarship, National School of Development, Peking University

Teaching Experience

Teaching Assistant

- Applied Econometrics, BUS 41903, University of Chicago Booth School of Business, 2023

Referee Activities

Journal of Applied Econometrics

Last updated: May 22, 2024