Luofeng Liao

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Google scholar link

Education

Columbia University Ph.D. in Operations Research 9/2021-3/2025 (3.5 years)
University of Chicago M.S. in Statistics 9/2019-1/2021
Fudan University B.S. in Computer Science, Shanghai, CN (rank 2/41) 9/2015-6/2019

Internships and Projects

Research Scientist, Meta NYC, US, 04/2025-now
Design ranking signals and improve user actions prediction in short-video recommendation systems.
Machine Learning Intern, Meta NYC, US, 05/2024-08/2024
Developed causally robust experimentation to account for infra-heterogeneity in AB test. Received full-time return offer.
Summer Associate Intern, Goldman Sachs NYC, US, 06/2023-08/2023
Developed data augmentation and variance reduction methods for stock price time series.
Research Scientist Intern, JD.com Inc. Beijing, CN, 03/2021-08/2021
Developed distributed algorithms for adversarial training. Research was published in *Machine Learning*.
Software Engineer Intern, Splunk Inc. Shanghai, CN, 2019
Developer, Data-driven Principal Component Analysis. Coding project sponsored by Google Summer of Code 2019 2019
Developer, GPU-accelerated Bayesian Regression, (CUDA C, Matlab) 2018

Selected Research Papers

Auction, Pacing, Autobidding & AB Test

ICLR 2025, Interference among First-Price Auction Equilibria: A Bias and Variance Analysis. L. Liao, C. Kroer, et al.
Management Science, Statistical Inference and A/B Testing for First-Price Auction Equilibrium. L. Liao, C. Kroer.

Fair and Efficient Allocation

AAAI 2024, Greedy-Based Online Fair Allocation with Adversarial Input. Z. Yang, L. Liao, C. Kroer.
NeurIPS 2022, Nonstationary Dual Averaging and Fair Online Allocation. L. Liao, Y. Gao, C. Kroer.

Causal Inference

Journal of Machine Learning Research, Instrumental Variable Value Iteration for Causal Offline Reinforcement Learning. L. Liao et al.
NeurIPS 2020, Provably Efficient Neural Estimation of Structural Equation Model. L. Liao, et al.

Optimization

NeurIPS 2026, The Bias-Variance Tradeoff in Data-Driven Optimization: A Local Misspecification Perspective
Machine Learning, Local AdaGrad-Type Algorithm for Stochastic Minimax Problems. L. Liao, et al.

Invited Talks

Accepted presentation, TTIC Workshop on Online Decision Making for Real-World Applications, Chicago, 7/2022
Accepted presentation, Columbia Workshop on Fairness in Operations and AI, New York, 11/2023
Invited talk, A/B Experimentation in Market Equilibria, hosted by Meta Experimentation & Market Algo team, online, 03/2023
Invited talk, 2023 INFORMS, Revenue Management and Pricing section, Phoenix, 10/2023
Accepted presentation, Stanford Rising Stars Workshop, Stanford, 04/2024
Spotlight talk, 2024 EC Workshops on Frontiers of Online Advertising, New Heaven, 07/2024
Invited talk, 2024 INFORMS, A/B Tests and Experiment Design section, Seattle, 10/2024

Skills

Languages and Dialects: Mandarin and Cantonese (native), English (fluent)
Programming Languages and Tools: Python, SQL, R, Matlab, C++, Linux shell, Latex, git, vim