Boxin Zhao **Last Updated: Sep 2023**

CONTACT INFORMATION
E-mail: boxinz@uchicago.edu
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RESEARCH INTERESTS
Statistical Machine Learning, Distribution Shift, Graphical Models, Distributed/Federated Learning, High-Dimensional Statistics, Functional Data Analysis, Optimization in Machine Learning, Data Market and Data Valuation.

EDUCATION

University of Chicago, Booth School of Business, Chicago, Illinois, USA

Ph.D. in Econometrics and Statistics, Oct 2020 - Jun 2025 (expected)

- Advisors: Mladen Kolar and Cong Ma

University of Chicago, Booth School of Business, Chicago, Illinois, USA

M.B.A., Concurrent with Ph.D., Oct 2020 - Jun 2025 (expected)

- Concurrent with Ph.D. degree.

University of Chicago, Chicago, Illinois, USA

M.Sc in Statistics, Oct 2018 - Jun 2020

- GPA: 4.00/4.00
- Master thesis topic: FuDGE: Functional Differential Graph Estimation with fully and discretely observed curves
- Advisors: Mladen Kolar and Rina Foygel Barber

Nankai University, Tianjin, China

B.Sc in Statistics (Degree with Honor), Sep 2014 - Jun 2018

- GPA: 93/100 (rank 1/82)
- Honors: National Scholarship (top 1%), Outstanding Graduate (top 3%), Tianjin Municipal People's Government Scholarship (top 3%), Zhide Scholarship (top 3%), First-Class Scholarship of Nankai University (top 5%)

SUBMITTED WORK

* denotes equal contribution.

[3] Boxin Zhao, Ziqi Liu, Chaochao Chen, Mladen Kolar, Zhiqiang Zhang, and Jun Zhou. Adaptive Client Sampling in Federated Learning via Online Learning with Bandit Feedback. **Submitted to Journal of Machine Learning Research (JMLR).** arXiv:2105.02487

[2] Boxin Zhao, Shengjun Zhai, Y. Samuel Wang, and Mladen Kolar. High-dimensional Functional Graphical Model Structure Learning via Neighborhood Selection Approach. **Submitted to Electronic Journal of Statistics (EJS).** arXiv:2105.02487

[1] Weishi Wang*, Boxin Zhao*, Mladen Kolar, Dingyuan Zhu, Ziqi Liu, Dong Wang, Zhiqiang Zhang, Jun Zhou. Personalized Binomial DAGs Learning with Network Structured Covariates. **Submitted to Journal of Computational and Graphical Statistics (JCGS).**

Publications

* denotes equal contribution.

[7] Katherine Tsai, Boxin Zhao, Sanmi Koyejo, and Mladen Kolar. Latent Gaussian Functional Graphical Models. **Accepted by Journal of the American Statistical Association (JASA) 2023.** arXiv:2105.02487

[6] Boxin Zhao, Boxiang Lyu, Raul Castro Fernandez and Mladen Kolar. Addressing Budget Allocation and Revenue Allocation in Data Market Environment Using an Adaptive Sampling Algorithm **Published on International Conference on Machine Learning (ICML) 2023.** arXiv:2306.02543

[5] Filip Hanzely*, Boxin Zhao*, and Mladen Kolar. Personalized Federated Learning: A Unified Framework and Universal Optimization Techniques. **Published on Transactions on Machine Learning Research (TMLR) 2023.** arXiv:2102.09743

[4] Lingxiao Wang, Boxin Zhao, and Mladen Kolar. Differentially Private Matrix Completion through Low-rank Matrix Factorization. **Published on Artificial Intelligence and Statistics (AISTATS) 2023.**

[3] Boxin Zhao, Boxiang Lyu, and Mladen Kolar. L-SVRG and L-Katyusha with Adaptive Sampling. **Published on Transactions on Machine Learning Research (TMLR) 2023.** arXiv:2201.13387

[2] Boxin Zhao, Y. Samuel Wang, and Mladen Kolar. FuDGE: A Method to Estimate a Functional Differential Graph in a High-Dimensional Setting. **Published on Journal of Machine Learning Research (JMLR) 2022.** arXiv:2003.05402

[1] Boxin Zhao, Y. Samuel Wang, and Mladen Kolar Direct Estimation of Differential Functional Graphical Models. **Publsihed on Conference on Neural Information Processing Systems (NeurIPS) 2019.** arXiv:1910.09701

Professional Service

Journal Reviewer

- Journal of Machine Learning Research (JMLR)
- Journal of the Royal Statistical Society Series B (JRSSB)
- IEEE Transactions on Signal Processing

Conference Reviewer

- Conference on Neural Information Processing Systems (NeurIPS)
- International Conference on Machine Learning (ICML)
- International Conference on Learning Representations (ICLR)
- International Conference on Artificial Intelligence and Statistics (AISTATS)

Honors and Awards

2022, Top 10% Highest Scoring Reviewers Award, ICML 2022

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

2019, Top 400 Highest Scoring Reviewers Award, NeurIPS 2019

2019, Student Travel Award, NeurIPS 2019

2018, Outstanding Graduate, Nankai University

2018, Zhide Scholarship, Nankai University

2017, Tianjin Municipal People's Government Scholarship, Nankai University

2016, National Scholarship, Nankai University

2015, First-Class Scholarship of Nankai University, Nankai University

Research and Internship Experience

Amazon Alexa, Applied Scientist Intern, Seattle, USA **Jun 2022 - Sep 2022**

- Supervisor: Qi Wang and Sunil Gandhi
- Topic: Data Evaluation in Learning to Rank Models

Ant Financial Group, Research Intern, Beijing, China **Jun 2021 - Sep 2021**

- Supervisor: Ziqi Liu, Senior Research Scientist, Ant Financial Group
- Topic 1: Client Sampling in Federated Learning System
- Topic 2: Causal Discovery with Network Linked Data

Yang Lab, Nankai University, Tianjin, China **Sep 2017 - May 2018**

- Lab Website: `https://yanglab.nankai.edu.cn/people/jianyi/`
- Supervisor: Jianyi Yang, Professor, School of Mathematical Sciences, Nankai University
- Topic: A Feature-Based Improvement of Computational Protein Function Prediction Using Machine Learning Methods

Skills

Programming Languages

- Python, R

Languages

- Native: Chinese
- Fluent: English