

Yikun Li

Basic Information

Mobile: (+1) 224-307-0286

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Address: 1845 Sheridan Rd, Evanston, IL 60208

Website: <https://tomlee0122.github.io>

Education

Doctor of Philosophy in Statistics and Data Science

2023-present

Department of Statistics and Data Science, Northwestern University

Evanston, IL, USA

Master in Statistics and Data Science

2023-2025

Department of Statistics and Data Science, Northwestern University

Evanston, IL, USA

Bachelor of Science in Statistics

2019-2023

School of Mathematical Sciences, Peking University

Beijing, China

Publications

Preprints

1. **Y. Li**, M. Neykov. Robust Signal Detection with Quadratically Convex Orthosymmetric Constraints. *arXiv preprint arXiv:2308.13036*, 2026.

Research Experiences

Research Assistant

June 2022-August 2022

Chongqing Research Institute of Big Data, Peking University

Advisor: Haochen Li, Pingwen Zhang

Project: Machine Learning Based Analysis of Meteorological Data and Forecasting

Contribution: designed a machine learning based model “*MOML*” to provide high-resolution prediction of weather conditions and meteorological disasters with meteorological data.

Undergraduate Dissertation

Sept. 2022-June 2023

School of Mathematical Sciences, Peking University

Advisor: Wei Lin

Project: Variance-Reduced Methods in Off-Policy Estimation

Contribution: proposed a new algorithm under the off-policy *Natural Actor-Critic* (NAC) framework to reduce the exponentially large variance induced by the traditional importance sampling method.

Research Assistant

July 2024-present

Department of Statistics and Data Science, Northwestern University

Advisor: Matey Neykov

Project: Robust Signal Detection with Quadratically Convex Orthosymmetric Constraints

Contribution: proved the optimal theoretical minimax lower bound for the signal detection problem with data corruption and *quadratically convex orthosymmetric* (QCO) constraints; proposed a robust testing algorithm that achieves the optimal minimax rate with polynomial-time complexity.

Academic Services

Reviewer for *Electronic Journal of Statistics*, 2025

Teaching Experiences

Northwestern University

Teaching Assistant, STAT 320-1: Introduction to Statistical Methods I	Fall 2024
Teaching Assistant, STAT 420-2: Introduction to Statistical Methods II	Winter 2025
Teaching Assistant, STAT 210-1: Introduction to Probability and Statistics	Spring 2025
Teaching Assistant, STAT 344: Statistical Computing	Fall 2025

Honors and Awards

Peking University

Merit Student, Academic Year 2019-2020
 Award for Academic Excellence, Academic Year 2020-2021
 Merit Student, Academic Year 2021-2022
 Excellent Graduate, Class of 2023
 Second prize, Chinese Mathematics Competition for College Students (class A), 2020
 Second prize, Chinese Mathematics Competition for College Students (class A), 2021
 Third Class Scholarships (¥4000), Academic Year 2019-2020
 Third Class Scholarships (¥4000), Academic Year 2020-2021
 Third Class Scholarships (¥4000), Academic Year 2021-2022

Skills

Programming

Proficient: C, Python, R, SQL, MATLAB, \LaTeX

Beginner: Mathematica, SPSS, CUDA, OpenMP, MPI

Languages

Chinese (Native), English (Fluent)