

XINHAO QU

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EDUCATION

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| Xiamen University | Xiamen, China | Sep 2021-Jun 2024 |
| <ul style="list-style-type: none">Master of Science in Statistics (Direction of Mathematical Statistics), Supervisor: Prof. Wei Zhong GPA: 3.64/4.00Leader of Machine Learning Group, WISERCLUBHonors: Academic Scholarship (2021-2023)Specialized Courses (PhD level): <i>Statistical Data Analysis</i>: 92 (Top 3%), <i>Statistical machine learning</i>: 92, <i>Multivariate Statistical Analysis</i>: 97 (Top 1%), <i>Large Sample Theory</i>: 100 (Top 1%), <i>Advanced Econometrics I</i>: 91, <i>Advanced Econometrics II</i>: 89 (Top 1%)Stat-Center Summer School at Peking University | | |
| | Beijing, China | Jul 2023-Aug 2023 |
| Zhengzhou University | Henan, China | Sep 2017-Jun 2021 |
| <ul style="list-style-type: none">Bachelor of Economics in Economic Statistics, Supervisor: Prof. Yanan Hu GPA: 3.75/4.00 (1/31)Honors: Graduation Highlight (2021), First-class Scholarship (2020&2018), “Zhong’ An Cotton” Scholarship (2019), Provincial Fellowship of Innovation and Entrepreneurship (2019), Second place of 16th National Challenge Cup Competition (Top 1%)Exchange Program: Stanford University & U.C. Berkeley | | |
| | Berkeley, CA | Feb 2019 |
| ■ Honors: Second Place (7/56) of Global Business Plan Competition (GBPC) | | |

PAPER&CONFERENCE

Xinhao Qu, Wei Zhong. Guided Transfer Learning for High-Dimensional Linear Regression, *Working Paper*.
Xinhao Qu. Partial Transfer Learning Under High-Dimensional Confounding: Estimation, Prediction, and Efficiency, *Master’s Graduation Thesis*, Dec 2023.
Yanan Hu, **Xinhao Qu**, Wolfgang Karl Härdle, Maozai Tian. Smoothed GMM for Spatial Quantile Regression Model, *Journal of Business & Economic Statistics*, Submitted, Nov 2023.
Yanan Hu, **Xinhao Qu**. Double/Debiased Machine Learning for Spatial Quantile Regression Model and Its Applications, *International Workshop on Statistical Theory and Related Fields (STARF)*, Dec 2021.
Yanan Hu, **Xinhao Qu**. SGMM for Spatial Quantile Regression Model, *Seminar on Modern Statistics of Xiamen University*, Dec 2020.

RESEARCH&TEACHING EXPERIENCE

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| Guided Transfer Learning for High-Dimensional Linear Regression | Sep 2023-present |
| <i>Working Paper, Co-author: Prof. Wei Zhong</i> | Xiamen, China |
| <ul style="list-style-type: none">Implemented debiasing procedure with data-driven adaptive weight for instances and parameters similar to Duan and Wang (2023).Utilized theoretical frameworks from Li et al. (2021) and Zou (2006) for rate of convergence with relaxed assumptions.Improved estimation and prediction performance evident in R simulation and GTEx application, resulting in smaller RMSE and error rate. | |
| Partial Transfer Learning Under High-Dimensional Confounding: Estimation, Prediction, and Efficiency | Jun 2022-Jul 2023 |
| <i>Master’s Graduation Thesis, Advisor: Prof. Wei Zhong, Prof. Jingyuan Liu, Prof. Xingbai Xu</i> | Xiamen, China |
| <ul style="list-style-type: none">Enhanced transfer learning framework based on Li et al. (2021) with a focus on latent confounding and heterogeneous transferrable sources.Developed detection algorithms using Tian and Feng (2022)-type cross-validation techniques, and sequential estimation algorithms based on DML, SCAD (Oracle) penalty and cross-fitting, suitable for extended scenarios, including federated cases with differential privacy.Demonstrated the consistency, asymptotic normality and enhanced efficiency of Partial Transfer Learning through large sample theory.Conducted extensive simulations and empirical analysis on GTEx database, demonstrated improved estimation and prediction performance of Partial Transfer Learning, by a faster rate of convergence and an average of 22.65% reduce in prediction error. | |
| Teaching Assistant: Introduction to Data Science | 2022 Fall |
| <i>Department of Statistics and Data Science, Xiamen University, Instructor: Prof. Qixian Zhong</i> | Xiamen, China |
| <ul style="list-style-type: none">Reviewed and graded weekly assignments in Python, providing timely feedback and addressing questions during class sessions.Delivered tutorial classes covering fundamental concepts of 'torch' in Python. | |
| Statistical Inference of Spatial Quantile Regression Model for High-Dimensional Data | Sep 2019-Aug 2021 |
| <i>The National Social Science Fund of China (NSSFYC Youth Project: No.19CTJ010), Main Participant</i> | Henan, China |
| <ul style="list-style-type: none">Analyzed high-dimensional spatial data with quantile heterogeneity. Conducted empirical research using Python to preprocess data from CHINA CITY STATISTICAL YEARBOOK, visualizing smog emissions' heterogeneity at different quantile points using Tableau.Applied and compared DML and Smoothed Generalized Method of Moments methods in spatial quantile regression, demonstrating superior performance over Instrumental Variable Quantile Regression through extensive simulations. | |

AWARDS

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| Preference Detecting for Heterogeneous Community Based on Comment Text | May 2022 |
| <i>2nd ‘MEITUAN’ National Business Analysis Elite Competition (22/1296, Top 2%), Core Team Member</i> | Online |
| The Impact of Decentralization on the Quality of Farmers' Income | Sep 2018-Oct 2019 |
| <i>Second place of 16th National Challenge Cup Competition (Top 1%), Core Team Member</i> | Beijing, China |
| <i>Provincial Fellowship of Innovation and Entrepreneurship</i> | Henan, China |

SKILLS&INTERESTS

Programming Language: R; Python; LaTeX; Research Interest: High-Dimensional Statistics; Causal Inference; Reinforcement Learning