ZHIYUAN CHEN

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EDUCATION

University of Chicago   *2023 - Present*
M.Sc in Statistics   Advisor: *Prof. Frederic Koehler* and *Prof. Wei Biao Wu*
Selected Courses: Matrix Computation (Ph.D. level), Mathematical Statistics-1 (Ph.D. level), Convex Optimization (Ph.D. level), Generative Deep Learning, Trustworthy Machine Learning, Algorithm for Massive Datasets, High-Dimensional Probability with Applications in Data Science

Beijing Normal University   *2019 - 2023*
B.Sc in Statistics   Advisor: *Prof. Gaorong Li*
Selected Courses: Applied Multivariate Statistical Analysis, Applied Stochastic Processes, Linear Model, Statistical Learning, High-Dimensional Statistics and Big Data Problem (Graduate level), Data Mining (Graduate level), Asymptotic Statistics

RESEARCH EXPERIENCE

Parallel Inference for Quantile Regression Using Stochastic Subgradient Descent Jun 2024 - Present *Master's Thesis*   Advisor: *Prof. Wei Biao Wu*

· Introduced a parallel inference framework for quantile regression using stochastic subgradient descent. The method addresses large-scale quantile regression by distributing computations across multiple processors and constructs confidence intervals for coefficients through averaging parallel runs, leveraging asymptotic theory.

Detoxification: Self Supervisor, External Monitor And Adversarial Trained System Prompt Mar 2024 - Jun 2024 *Course Project*   Advisor: *Prof. Bo Li*

· Developed three methods for large language models (LLMs) to prevent toxic content generation: using self-supervision for toxicity detection, external API monitoring, and adversarial models to train system prompts for toxic content prevention.

Doubly Debiased Lasso in Partially Linear Model Under Hidden Confounding Sep 2022 - May 2023 *Undergraduate Dissertation*   Advisor: *Prof. Gaorong Li*

· Combined the Doubly Debiased Lasso and Partially Linear Models to extend the former to the nonlinear situation. The new model has both linear and nonlinear parts and can simultaneously remove the bias caused by Lasso in high-dimensional cases and hidden confounding.

WORKING EXPERIENCE

China Construction Bank, Beijing Branch   Jul 2021 - Aug 2021
Financial Technology Internship

· Participated in a risk prediction project using public news. Identified public information from listed companies, converted textual data into structured data, and classified credit labels using NLP and machine learning models.

AWARDS AND HONORS

Beijing Normal University "Moon Cup" Basketball Competition (2nd Place, 2020)

Merit Student (2021)

Jingshi Scholarship (2nd Award, 2021)

Mathematics Competition of Chinese College Students (2nd Prize, 2021)

SKILLS

Programming	R, Python, LaTeX
Languages	English (IELTS 7.5, GRE 324), Mandarin (Native)