

YUNCHENG HAO

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EDUCATION

University of Illinois at Chicago

PhD in Mathematics (Statistics)

GPA: 4.0/4.0

January 2023 - Present

Chicago, IL

University of Illinois at Chicago

Master of Science in Statistics

GPA: 4.0/4.0

September 2021 - December 2022

Chicago, IL

Southwest University of Political Science and Law

Bachelor of Economics

GPA: 3.2/4.0

September 2017 - July 2021

Chongqing, China

TEACHING EXPERIENCE

Department of Math, Stat, & Comp Sci, UIC

Teaching Assistant - Math 110: Collage Algebra

Chicago, IL

August 2024 - Present

- Lead discussion sections for three classes of 20 undergraduate students each, focusing on problem-solving techniques and conceptual understanding.
- Facilitate active learning through prepared interactive mini-lectures, group discussions, and quizzes.
- Provide academic support during office hours by assisting students with homework and exam preparation.
- Grade assignments and exams, providing detailed feedback to improve student understanding.
- Collaborate with the course professor to develop teaching materials and improve classroom engagement.

RESEARCH EXPERIENCE AND PROJECTS

Department of Math, Stat, & Comp Sci (MSCS), UIC

Research Assistant

Chicago, IL

January 2023 - May 2024

– Nonparametric Interaction Selection

- Investigated variable selection and estimation methods for high-dimensional, nonlinear data with interaction effects under the guidance of two professors at MSCS.
- Utilized b-spline and bivariate spline over triangulation to approximate main and interaction effects, respectively, and employed a modified adaptive group lasso for basis function selection.
- Conducted simulation studies and applied statistical models in R and Python to test and refine methodologies.
- Independently reviewed and synthesized literature to inform model development and improvement, while iteratively modifying statistical approaches.
- Prepared detailed reports and presented findings at weekly meetings with professors and received feedback.

– Predicting Epilepsy in Patients with SAH Using Longitudinal Measurements

- Collaborated with a research team at the College of Medicine, UIC.
- Provided statistical expertise, including data analysis, model building, and statistical inference on large and unequally spaced repeated measures data.
- Applied advanced statistical methods such as Functional Principal Component Analysis and group lasso for variable selection and prediction, and Smoothing Spline ANOVA for identifying significant predictors.
- Regularly presented research progress and statistical insights to the team, contributing to collaborative decision-making and project direction.
- Recognized for high-quality collaboration and the statistical impact on project outcomes.

- Primary duties were related to the research of corporate finance topics.
- Analyzed data from financial statements of Chinese listed companies, extracted important and interesting information, designed and tested models, and performed statistical analysis.
- Finally published the two articles in *Journal of Contemporary Financial Research* and *Research of Institutional Economics*, respectively.

The Bank of China - Chongqing Business Management Department
Research Assistant (School and Company Cooperation)

Chongqing, China
January 2021 - July 2021

- **Study of Macro Leverage Vigilance**
- Combed through the domestic and international literature about macro leverage vigilance.
- Processed data to derive the inverted U-shaped relationship between leverage ratio and economic growth rate through categorical descriptive statistics.

Chongqing International Trust Co., Ltd.
Research Assistant (School and Company Cooperation)

Chongqing, China
October 2020 - May 2021

- **Research on the Practice and Model Innovation of Financial Precision Poverty Alleviation**
- Employed specific data to conduct an in-depth analysis of the causes of poverty in poor regions and assisted companies in innovating financial products and introducing support policies to alleviate poverty.

TECHNICAL SKILLS

Programming	R, Python, SAS, SQL, Stata
Relevant Skills	Probability Theory, Applied Statistical Methods, Non-parametric Statistics, Optimal Design Theory, Survival Data Analysis, Longitudinal Data Analysis, Functional Data Analysis, Statistical Learning, Machine Learning, Data Mining...

CONTEST

“Challenge Cup” National College Academic and Technological Competition June 2021, June 2020

- Two Provincial **Grand** Prizes

Contemporary Undergraduate Mathematical Contest in Modeling September 2020

- National **Second** Prize

Contemporary Undergraduate Mathematical Contest in Modeling September 2019

- Provincial **First** Prize

China Undergraduate Statistical Contest in Modeling June 2019

- National **Second** Prize

HONORS AND AWARDS

- **Outstanding Undergraduate of Innovation Ability**, Chongqing, China, 2020
- **The Second Prize Scholarship**, Southwest University of Political Science and Law, 2019, 2020

PUBLICATIONS

- **Hao, Y.**, Zhou, X., Xiao, Z. (2020). Spatial Concentration of Institutional Investors, External Supervision and Surplus Management. *Journal of Contemporary Financial Research*, 05, 8-21.
- Wang, Z., Zhou, X., Xu, M., **Hao, Y.**, Xiao, Z. (2020). An Empirical Analysis of The Mechanism of Institutional Investors' Spatial Dispersion on Cash Holding of Listed Companies. *Research of Institutional Economics*, 04, 94-117.