

ZIROU ZHOU

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PROFESSIONAL SUMMARY

- Over 5 years of theoretical and hands-on experience in mathematical and statistical research.
- 2 manuscripts in peer-reviewed journals and 2 more under peer review.
- Technical and scientific consulting for industry and academia.

TECHNICAL SKILLS

- Database Management: SQL (MySQL, MS Access, SQL server).
- Statistic Languages: R, SAS, Python (Pandas, NumPy), Expert Excel (VLOOKUP, SORT, FILTER, COUNTIF).
- Data Visualize Tools: R (ggplot), Python (Matplotlib).
- Data Science: Statistics survey, Generalized liner mixed effect model, Missing data, Causal inference, Bayesian Analysis, Deep Learning (TensorFlow, PyTorch), EM Algorism, Small Area Estimation, Stochastic and Time Series Analysis, Machine Learning, Non-parametric Regression.

EDUCATION

Ph.D. in Statistics, Iowa State University (ISU), Ames, IA	January 2022 – July 2025
M.S. in Statistics, Iowa State University (ISU), Ames, IA	August 2018 - June 2021
B.S. in Statistics, Iowa State University (ISU), Ames, IA	August 2012 - May 2017

PROFESSIONAL EXPERIENCE

Center for Survey Statistics and Methodology (CSSM), Ames, IA	May 2023 – May 2024
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Research Assistance on Data Analysis and Visualization

- Conducted analysis by reading in data and creating indicator variables for imputed points.
- Performed robust data analysis to understand distinctions between real, pseudo, retention, and killed points. Employed Monte Carlo Simulation methods to comprehensively evaluate the categorical nearest neighbor model's efficacy in diverse scenarios.
- Led a comprehensive assessment of the model's performance and report writing for submission.

Orchestra Technology, Remoted/Basking Bridge, NJ	September 2021 - January 2022
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Data Analysis

- Conducted analysis on data logs, visualizing information and generating track-specific improvement reports.
- Led study analyses, programmed experiments, and reviewed outcomes for comprehensive reports. Crafted the statistical methods section to enhance the quality of the reports.
- Performed data analysis and intelligence tasks using SAS, R, and various dashboard/visualization tools.

Economic Department, Iowa State University, Ames, IA	August 2020 - May 2021
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Research Assistance on Data Analysis

- Conducted analysis for the final report on the economic impact of goods' imports and exports. Cleaned up the import and export catalogue database.
- Led data structuring using SQL and EXCEL, combining columns from multiple sheets. Utilized VLOOKUP and FILTER for effective analysis.

- Completed the first draft within three weeks and incorporated improvements guided by Dr. Zhang.

Mathematic Department, Iowa State University, Ames, IA

August 2017 - May 2018

Volunteer Researcher on Data Analysis and Visualization

- Conducted theoretical analysis on stochastic processing.
- Assisted in proofreading and manuscript writing tasks.

PUBLICATION

- Roitershtein, A., & Zhou, Z. (2017). Relative growth of the partial sums of certain random fibonacci-like sequences. *Journal of Difference Equations and Applications*, 23(12), 1913–1928. <https://doi.org/10.1080/10236198.2017.1378353>
- Roitershtein, A., & Zhou, Z. (2022). Distribution tails of a history-dependent random linear recursion. *Stochastic Models*, 38(2), 250–267. <https://doi.org/10.1080/15326349.2021.2003712>