

ZEWEI LIN

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Carl H. Lindner College of Business, University of Cincinnati
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ACADEMIC APPOINTMENTS

Tenure-Track Assistant Professor, 2024 - Present
Department of Information Systems and Analytics, McCoy College of Business, Texas State University

EDUCATION

Ph.D. in Business Administration (Business Analytics, GPA: 4.0/4.0), 2019 - 2024
Carl H. Lindner College of Business, University of Cincinnati

B.S. in Mathematical Statistics | B.A. in Philosophy | B.Ec. in Economic Statistics, 2015 - 2019
Renmin University of China

RESEARCH EXPERIENCE

Research Interests: Business Analytics, Model Transparency, Model Diagnostics, Discrete Data, Network Inference, Statistical Inference/Machine Learning in Finance/Information System.

— *To fulfill business needs and regulatory requirements, my research focuses on developing statistical/machine learning methods to address the multifaceted challenges associated with **model transparency**. The goal is to understand the inner workings of complex models, thereby promoting **more transparent, trustworthy, and interpretable data-driven decision-making models**. I primarily work on problems that involve **discrete data** (e.g., **binary, rating or count data**) which amplify statistical challenges and call for new developments.*

Published Papers:

- Zhu, X., **Lin, Z.**, Liu, D. & Greenwell B. (2024), “*Surr.rsq*: an R package for evaluating goodness of fit using surrogate R^2 ”, *the New England Journal of Statistics in Data Science*:1-12. [\[DOI\]](#) [\[Package\]](#)
- Liu, D., Zhu, X., Greenwell B., & **Lin, Z.** (2022), “A new goodness-of-fit measure for probit models: surrogate R^2 ”, *British Journal of Mathematical and Statistical Psychology*, 76, 192-210. [DOI](#).

Invited Revision Papers:

- Liu, D., **Lin, Z.**, & Zhang, H. “A unified framework for residual diagnostics in generalized linear models and beyond”, invited revision at *the Journal of the American Statistical Association*. [ArXiv](#).

Working Papers:

- Lin, Z.**, Liu, D. & Bauer, D., “Unfolding Tweedie regression model for insurance premium pricing: a diagnostic tool leading to actionable insights.”, targeting *Management Science*.
- Lin, Z.**, Liu, D. & Samuel, B., “Joint modeling of multivariate discrete outcomes? An exploratory framework and its application for the design of information system”, targeting *Information Systems Research*.

Research in Progress:

- “Bootstrap estimation for sparse edge-exchangeable network,” with Yichen Qin.
- “Analyzing Conflicting Information via Multi-dimensional Textual Network Analysis Framework,” with Tianhai Zu

AWARDS

- OBAIS Department Graduate Student Teaching Award Recipient 02/2023
- [Student and Early-Career Travel Awards](#), Symposium on Data Science and Statistics 06/2022

- [Student Poster Awards \(Sponsored by Munich Re\)](#), New England Statistics Symposium 05/2022
- *Mingde* Excellent Student Scholarship, Renmin University of China 06/2017

PRESENTATIONS

- **Contributed session**, “*Unfolding Tweedie model for insurance pricing: a diagnostic tool leading to actionable insights*”, INFORMS Annual Meeting, Phoenix, AZ. 10/2023
- **Contributed papers session**, “*Unfolding Tweedie model for insurance pricing: a diagnostic tool leading to actionable insights*”, the Joint Statistical Meetings (JSM), Toronto, ON. 08/2023
- **Contributed poster**, “*A unified framework for residual diagnostics in generalized linear models and beyond*”, ICSA Applied Statistics Symposium, Ann Arbor, MI. 06/2023
- **Invited session**, “*Surrogate R^2 : a new goodness-of-fit measure and an R package for categorical data analysis*”, New England Statistics Symposium (NESS), Boston, MA. 06/2023
- **Contributed poster**, “*Unfolding Tweedie model for insurance pricing: a diagnostic tool leading to actionable insights*”, The Eighth Bayesian, Fiducial and Frequentist conference (BFF8), Cincinnati, OH. 05/2023
- **Contributed poster**, “*Model diagnostics of discrete data regression: a unifying framework using functional residuals*”, the Joint Statistical Meetings (JSM), Washington D.C. 08/2022
- **Refereed session with travel award**, “*Model diagnostics of discrete data regression: a unifying framework using functional residuals*”, Symposium on Data Science and Statistics (SDSS), Pittsburgh, PA. 06/2022
- **Student award presentation**, “*Model diagnostics of discrete data regression: a unifying framework using functional residuals*”, New England Statistics Symposium (NESS), Mansfield, CT. 05/2022
- **Contributed session**, “*Analyzing conflicting information via multi-dimensional textual network analysis framework*”, INFORMS Annual Meeting, Virtual. 10/2020

TEACHING EXPERIENCE

Teaching Interests

- Introduction level courses: Introduction to Business Analytics, Descriptive Analytics, Predictive Analytics, Prescriptive Analytics, Business Intelligence.
- Advanced level courses: Applied Linear Regression, Statistical Modeling, Data Mining, Optimization Methods in Analytics, Big Data Analytics, Probability models.
- Programming courses: AI and Machine Learning Algorithm, Data Wrangling, Text Mining, Statistical Computing, Data Manipulation and Visualization with Python/R.

Instructor, Texas State University

- **ANLY 3341 Computational Analytics** Fall 2024
- **ANLY 5332 Optimization for Business Analytics** Fall 2024

Instructor, University of Cincinnati

- Online courses:
 - **BANA 4085 Spreadsheet Analytics** (Undergraduate level, Eval: 8.0/8.0) Spring 2021
 - **BANA 7046 Data Mining I** (Graduate level, Eval: 7.3/8.0) Spring 2022
- Hybrid courses:
 - **BANA 6043 Statistical Computing** (Graduate level, Eval: 7.8/8.0) Fall 2021

- In-person courses:

- **BANA 7025 Data Wrangling** (Graduate level, Eval: 7.6/8.0)

Fall 2022

- **BANA 7046 Data Mining I** (Graduate level, Eval: 7.8/8.0)

Spring 2023

Teaching assistant

— Undergraduate level courses

- BANA 2081 Business Analytics I
- BANA 2082 Business Analytics II
- BANA 4085 Spreadsheet Analytics
- BANA 4137 Descriptive Analytics and Data Visualization
- BANA 4143 Data Management for Analytics

— Graduate level courses

- BANA 6043 Statistical Computing
- BANA 7052 Applied Linear Regression
- BANA 7046 Data Mining I
- BANA 7047 Data Mining II

Second Reader for Capstone Essays

- *The Capstone essay forms an essential part of the Master of Science in Business Analytics curriculum, necessitating a comprehensive analysis grounded in a real-world data project.*
- *I served as the second reader for **14 individual projects**, covering a wide spectrum of topics. These spanned from **forecasting demand and segmenting customers to analyzing customer reviews, classifying toxic comments, and predicting medical claims.***

PROFESSIONAL MEMBERSHIPS

- Student President at UC Chapter, The Institute for Operations Research and the Management Sciences (INFORMS).
- Member, American Statistical Association (ASA).
- Member, Institute for Mathematical Statistics (IMS).
- Member, New England Statistical Society (NESS).

SKILLS

Programming

R, Python, SPSS, SAS, C++, Matlab, Stata, and Eviews.

R Packages Developed

[SurrogateRsq](#).

Languages

English (fluent); Chinese (native); Japanese (N3).