Lingxiao Xu

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Education

Communication University of China, Beijing, China *Sept. 2021- July. 2025*

B.Eng. in Data Science and Big Data Technology (Big Data in Media); GPA:93/100 (rank: top 5%)

- ***Advanced Statistical courses:*** Mathematical Statistics, Applied Multivariate Statistical Analysis, Regression Analysis, Bayesian Statistics, Applied Stochastic Process, Optimization Theory and Methods
- ***Technology courses:*** Big Data and Artificial Intelligence, Machine Learning, Data Mining Methods, Machine Translation Operation Based on Python, Programming Methodology with C/C++, Natural Language Processing

Professional Skills

- **Language skills**: English (Second Language); Mandarin (Chinese)
- **Computer skills**: coding, modeling and statistics in R/ Python/ C/ C#/ Matlab/ Lingo (proficient)
- **Tools and Packages**: Git, Numpy, Pytorch, Scikit Learn

Publications

- Jun He, **Lingxiao Xu**, and Bo Li*. “Optimization and Evaluation Methods for Automation of E-commerce Logistics Networks.” 2024 16th International Conference on Computer and Automation Engineering (ICCAE), 2024, DOI:10.1109/ICCAE59995.2024.10569460
- Shiyue Mao, **Lingxiao Xu**, Felipe Rodriguez. “Driving with cleaner engines: the evolution of diesel heavy-duty vehicles in China 2012-2023” The International Council on Clean Transportation(ICCT) Working Paper (Accepted)
- **Lingxiao Xu**, Shiyue Mao, Felipe Rodriguez " China heavy-duty vehicle market development (January – June 2024)" The International Council on Clean Transportation(ICCT) Working paper (Accepted)

Research Projects

Construction of Knowledge Graphs and Style Image Generation for China’s Four Famous Brocades

Advisors: prof. Li Bo & prof. Hong Zhiguo, Communication University of China *Apr. 2023 - Apr. 2024*

- Secured a software copyright after I integrated over 25,000 color images covering 48 patterns and developed the “Chinese Famous Brocade Web Application System”.
- Analyzed brocades’ data using relationship extraction techniques and graph databases (Neo4j) to construct a knowledge system.
- Applied convolutional neural networks to create digitally textured brocade.
- Won a silver medal in the National “Internet+” Innovation Competition.

Investigation and Analysis on Political Theory Dissemination via Social Media *Apr. 2023 - Apr. 2024*

Advisor: prof. Chen Rui, Communication University of China

- Analyzed how Beijing’s Gen Z perceives political theory through social media using SEM, SVM, and network analysis to conclude social influence thresholds and community structures.
- Discovered significant temporal dependencies and positive correlations between keyword usage, headline length, and article sharing volumes.
- Developed optimization strategies of news for political theory and policymakers.

Evaluating Aesthetic Features of UI Interfaces through Data Mining *Oct. 2023 - Feb. 2024*

Advisor: Dr. Jiang Zexun, Communication University of China

- Acquired a software copyright after completed the initialization and migration of a UI database.
- Preprocessed UIUC's Rico dataset containing over 72,000 unique UI screenshots, using ResNet models and graph neural networks for denoising, resulting in a refined dataset of 60,000 entries.
- Extracted key aesthetic features, e.g., consistency and harmony, using deep learning models (StyleGAN) to optimize user interface design.
- Developed an automated tool that generates UI optimization suggestions.

Optimization for Automation of E-commerce Logistics Networks. *Apr. 2023 - May 2023*

Advisor: prof. Li Bo, Communication University of China

- Addressed issues in e-commerce logistics networks, including cargo volume forecasting, station closures, network adjustments and evaluations for emergency mobilization and structural optimization.
- Used logistics network data from 2021 to 2023to construct models: ARIMA-LSTM Cargo Flow Predictor, Optimized Planning via Simulated Annealing, and SITE-TOPS Evaluation System.
- Combined ARIMA and LSTM models to achieve optimal cargo volume forecasts, with weights of 0.24 and 0.7.

Working Experiences

The International Council on Clean Transportation (ICCT) *Apr. 2024 - Oct. 2024*

Research assistant, *the Heavy-Duty Vehicles (HDV) program*

Advisor: Mao ShiYue

- Analyzed data from nearly 10 million Chinese heavy vehicles to assess key indicators such as fuel consumption, service quality, total weight, and engine displacement from 2012 to 2023.
- Authored a brief on the trends of diesel heavy vehicles, explaining the progress of pollutant control technologies; designed the report in a figure-heavy, text-light, and infographic style.
- Authored the 2023 Zero Emission Truck and Bus Market Update Brief, presenting a high-level overview of major market patterns for zero-emission heavy-duty vehicles (ZE-HDV) based on 2023 sales data; designed the brief in a figure-heavy, text-light, and infographic style.
- Prepared the Zero-emission Truck and Bus Market Spotlight Q1 2024 briefing, which will provide an update on the China ZE-HDV market landscape based on the latest sales data.
- The above paper will be published on https://theicct.org/publication/.

Honors and Awards

• National Student E-commerce "Innovation, Creativity and Entrepreneurship" Competition	Special Prize	*Jun. 2024*
• "Zhengda Cup" National College Student Market Research and Analysis Competition	National Third Prize	*May 2024*
• The Interdisciplinary Contest in Modeling (ICM)	Meritorious Winner	*May 2024*
• National Scholarship for Undergraduates	First Prize (top 0.2%)	*Dec. 2023*
• Asia and Pacific Mathematical Contest in Modeling	Second Prize	*Nov. 2023*
• National College Students Statistical Modeling Contest	Second Prize	*Aug. 2023*
• "Huashu Cup" Mathematical Contest in Modeling	Third Prize	*Aug. 2023*
• MathorCup Mathematical Modeling Challenge	First Prize	*May 2023*