Jie Zheng

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EDUCATION

Ph.D. in Management Information Systems — **Aug. 2023 – Present**
Purdue University — *West Lafayette, IN*

Ph.D. student, Information Technology Management — **Aug. 2022 – Aug. 2023**
Georgia Institute of Technology — *Atlanta, GA*
Transferred to Purdue University

M.S. Management Science and Engineering — **Sep. 2019 – June 2022**
University of Electronic Science and Technology of China — *Chengdu, China*

B.S. Finance — **Sep. 2015 – June 2019**
University of Electronic Science and Technology of China — *Chengdu, China*

B.E. Electronic Information Engineering — **Sep. 2015 – June 2019**
University of Electronic Science and Technology of China — *Chengdu, China*

WORKING PAPERS

- Yuan, H., **Zheng, J.**, Ye, Q., Yang, M., Qian, Y., 2021. Harvesting Trade Partners Online with AI: A Joint Learning Method for Predicting the Business Role of Massive Web Pages. (Under review in **Information Systems Research**).
- **Zheng, J.**, Yuan, H., Qian, Y., 2021. A Hybrid Approach of Adversarial Graph Attention Network for Social Recommendation. (In preparation for submission).

WORK IN PROGRESS

- **Zheng, J.**, Li, P., Rahman, M., Hu, Y., 2024. The Economics of Machine Metrics.
- **Zheng, J.**, Li, P., Rahman, M., Hu, Y., 2024. Aligning Linguistic Features with Business Performance in LLM Design.

PUBLICATIONS

- Yuan, H., **Zheng, J.**, Ye, Q., Qian, Y., Zhang, Y., 2021. Improving fake news detection with domain-adversarial and graph-attention neural network. **Decision Support Systems** 113633. https://doi.org/10.1016/j.dss.2021.113633

CONFERENCES

- **Fine-Tuning Large Language Models for Knowledge-Intensive Tasks: Best Practices and Strategies** *POMS Conference 2024*
- **Fine-Tuning Large Language Models for Knowledge-Intensive Tasks: Best Practices and Strategies** *Business & Generative AI Workshop 2023*

AWARDS

Crowe Graduate Student Scholarship, 2024
Chinese National Scholarship (top 0.1% graduate nationally), 2021
The First Prize of Academic Scholarship, 2021
The 3rd Prize (National) in the 2020 CCF Big Data & Computing Intelligence Contest - Fake news detection on the Internet during the COVID-19 Track (Top 3 in near 2000 teams in the nation), 2020
The 24th Place (National) in the 2020 National Artificial Intelligence Challenge - AI + Wireless communication Track (Top 24 in around 2000 teams in the nation), 2020
First Class Scholarship for New graduate, 2019
The 1st Prize (National) in the 2017 National Undergraduate Electronics Design Contest, 2017

SKILLS

Research Fields: Economics of AI, Machine learning
Languages: English (Fluent); Chinese (native)

Application for Digital Economics and AI Tutorial

Contact Information

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Course of Graduate Study and Years of Enrollment

I am currently a second-year Ph.D. candidate in MIS at Purdue University. My doctoral journey began at the Georgia Institute of Technology (Georgia Tech), where I completed my first year of coursework. During that time (Year 1), I focused on foundational economic theory and quantitative methods, taking Econometrics I & II, Microeconomic Theory I & II, Causal Methods in Empirical Research, and multiple Ph.D. seminars taught by faculty in the Information Technology Management (ITM) department.

After completing my first year at Georgia Tech, I transferred to Purdue University to continue my Ph.D. studies under the guidance of my advisor, who relocated there. At Purdue (Years 2 and 3), I have expanded my methodological and substantive expertise, taking Bayesian Econometrics I & II, Experimental Economics, Applied Economics, Deep Learning, Data Mining, a Computer Science Seminar on Reasoning with Large Language Models (LLMs), Reinforcement Learning, a Seminar on Structural Economic Modeling, and multiple Ph.D.-level seminars taught by professors in MIS.

These selections have provided me with a rigorous quantitative skillset, a strong grounding in microeconomic theory, and advanced technical knowledge in machine learning and AI applications. As a result, I have developed an interdisciplinary perspective that combines formal economic modeling, empirical evaluation, and computational methodologies.

Research Interests and Projects

My research interest is in the economics of AI and the design of AI systems. In the past, much of my work has focused on AI algorithm design, including areas such as fake news detection and recommender systems. Currently, I am interested in how AI tools and systems shape economic outcomes, organizational performance, and decision-making processes.

In one ongoing project, I am collaborating with a consulting firm to examine how the introduction of a specially designed generative AI system influences the performance of business analysts and the results of negotiation processes. This research explores how AI-generated insights affect human behavior in professional settings, including productivity, decision quality, and the economic surplus realized from negotiations.

In another line of research, I investigate how AI systems interact with human experts and stakeholders in critical, high-stakes decision environments, specifically organ transplant allocation. This project examines how algorithmic recommendations influence human judgments, whether the incorporation of AI can reduce or exacerbate existing biases, and the conditions under which human-AI collaboration leads to more equitable and efficient outcomes.

Dissertation and Committee

- **Advisor:** Prof. Yu (Jeffrey) Hu, Purdue University
- **Co-Advisor:** Prof. Mohammad Rahman, Purdue University
- **Committee Member:** Prof. Pan Li, Georgia Institute of Technology