Application for Digital Economics and AI Tutorial

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 courses such as:

- Econometrics I & II
- Microeconomic Theory I & II
- Causal Methods in Empirical Research
- 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 a wide range of courses at the intersection of economics, data science, and information systems, including:

- Bayesian Econometrics I & II
- Experimental Economics
- Applied Economics
- Deep Learning

- Data Mining
- Computer Science Seminar on Reasoning with Large Language Models (LLMs)
- Reinforcement Learning
- Seminar on Structural Economic Modeling
- Ph.D.-level seminars taught by professors in Management Information Systems (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 primary research interests lie in the economics of artificial intelligence, particularly focusing on how AI tools and systems shape economic outcomes, organizational performance, and decision-making processes. Within this broad area, I emphasize the design, evaluation, and policy implications of AI-driven solutions.

Current Research Projects

1. **Generative AI in Analyst Performance and Negotiation Outcomes:** In collaboration with a consulting firm, I am examining how the introduction of a specially designed generative AI system influences the performance of business analysts and the results of negotiation processes. This project explores how AI-generated insights affect human behavior in professional settings, including productivity, decision quality, and the economic surplus realized from negotiations. The goal is to inform how organizations can optimally integrate generative AI tools to enhance employee decision-making and improve negotiation efficacy.
2. **Human-AI Collaboration and Algorithmic Biases in Organ Transplant Allocation:** 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

My dissertation centers on the interplay between AI technologies and economic decision-making, with a particular focus on the design features and governance mechanisms that influence outcomes in professional and institutional settings.

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