Xinghao Yao

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Research Fields Primary: Behavioural Economics; AI-related.
Secondary: Experimental Economics; Information Economics; Auctions and Market Design.

References

Lionel Page
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Job Market Paper

How Robust Is LLM Economic Decision-Making? An Auction Benchmark
with Kenan Kalayci

Economic robustness requires both appropriate adjustment to changing fundamentals and resistance to information that theory predicts should not affect decisions. Using a benchmark of 78 auction environments, we evaluate six large language models (LLMs) in nine configurations against equilibrium predictions for risk-neutral bidders. We find that strong performance is often specific to particular conditions and decisions. In first-price auctions, high bidding accuracy under uniformly distributed private values does not consistently carry over to normally distributed private values. These limits also emerge across connected decisions: entry or information-purchase frequencies close to theoretical predictions can coexist with inaccurate subsequent bids. Conversely, accurate bids among entrants can coexist with entry frequencies far from those predictions. In first-price auctions with costly entry, historical-price information is associated with bidding changes and generally higher entry-error rates than without this information, despite leaving theoretical predictions unchanged. Without an entry decision, most configurations' bids change little across historical-price conditions. These findings support evaluating LLMs under the economic conditions and across the connected decisions relevant to their intended use, since isolated successes and aggregate scores can conceal substantial gaps in performance.

Working Papers

Information Disclosure in Private-Value Auctions
with Kenan Kalayci | *Working paper*

What You See Is All There Is? A Registered Direct Replication of Enke (2020)
R&R | *Journal of the Economic Science Association*

Sponsorship Disclosure as a Strategic Informational Cue: A Two-Sided Labelling Model and Meta-Analysis of Influencer Marketing
with Tianyuan Feng | *Major revision* | *Journal of the Academy of Marketing Science (FT50)*

My contribution was to develop the paper's two-sided labelling model.

From Analysis to Affect: Modeling and Measuring Finfluencer Communication with Generative LLMs
with Tianyuan Feng | *Under review* | *Journal of the Academy of Marketing Science (FT50)*

My contribution comprises the economic modelling and generative LLM-based textual analysis, including the classification of semantic content and discrete emotion frames.

Work in Progress

Accuracy or Affirmation? Competition in AI Advice Markets

Underquoting in Endogenous Entry Auctions

Do you know how attractive you are? A Two-Sided Search Model with Self-Uncertainty

Education

The University of Queensland **2023-present**
PhD in Economics (expected early 2027)
Supervisors: Kenan Kalayci and Lionel Page.

The University of Queensland **2022**
Master of Advanced Economics

The University of Queensland **2018-2021**
Master of Applied Econometrics

Huaqiao University **2013-2017**
BEng in Industrial Design

Research Collaboration

Project Silicon
Contribute experimental data and replication materials, and review simulation results based on our experiments.

Teaching Experience

Tutor, The University of Queensland **2023-2026**
Microeconomic Analysis: student evaluation 4.83/5.
Introduction to Econometrics: student evaluation 4.8/5.

Conferences

Asia-Pacific ESA Meeting, University of Melbourne | Presenter 2026

Australasian Economic Theory Workshop (AETW), Auckland | Presenter 2026

Australian PhD Conference in Economics and Business, UNSW | Presenter 2025

Summer School in Experimental and Behavioral Economics, University of Crete | Participant 2025

Foundations of Utility and Risk (FUR), The University of Queensland | Presenter 2024

Other Related Experience

Research Assistant, UQ QSMAT program.

Summer Research Scholar, The University of Queensland 2019-2020

Master's thesis: constructed a Chinese financial-text corpus incorporating domain-specific expressions for sentiment classification and predicting the direction of stock price movements.

DiDi, Safety Department: behavioural analysis Jun-Nov 2017

Research Skills and Languages

Methods: laboratory experiments, applied econometrics, game-theoretic modelling, machine learning and natural language processing.

Software: Python (proficient); Stata, R and MATLAB (working knowledge); oTree.

Languages: Mandarin (native); English (fluent).