Application for
Digital Economics and AI Tutorial

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1 Contact information

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2 Description of the course of graduate study

I am currently in my fifth year of the PhD program in Quantitative Marketing at the UCLA Anderson School of Management. My graduate coursework and research training span Economics (PhD and Master's) and Computer Science (Master's).

- Economics
  - Methods in Econometrics
  - Regression Analysis
  - Econometrics i, ii, iii
  - Advanced Econometrics
  - Industrial Organization A, B
  - Topics in Industrial Organization
  - Math Theory in Industrial Organization
- Computer Science (& Statistics)
  - High Dimensional Data Analysis
  - Bayesian and Modern Statistics
  - Theory and Algorithms for Machine Learning
  - Computational Microeconomics
  - Probabilistic Machine Learning
  - Computer Vision

3 Research

- Research Interests
  - Algorithmic Learning, Cross-platform Competition, Structural Asymmetry, Reinforcement Learning
- Research Project (Dissertation)
  - Title: Dominant Followership in Algorithmic Pricing: How AI Shapes Rival Learning and Market Outcomes
  - Abstract: AI-based pricing algorithms are increasingly used across digital retail platforms, yet little is known about how learning dynamics interact with market dominance. Using novel high-frequency price data, I show that Amazon behaves primarily as a fast, precise price follower, consistently responding to rivals' price increases across products. This empirical pattern motivates a reinforcement learning framework that identifies the mechanism through which followership becomes advantageous for a dominant firm in a learning-based pricing environment. When a firm has advantages in consumer loyalty or algorithmic capability, waiting and responding grants it a timing and information advantage. Because learning-based pricing agents do not anticipate rivals' future actions, the dominant follower's move each round effectively shapes the reward environment from which the smaller rival learns. Simulations show that this dominant followership pushes the non-dominant firm toward persistently higher prices, raising market prices. These results highlight how structural asymmetries and algorithmic learning can entrench dominant platforms through rivals' adaptive behavior and reduce consumer welfare.
- List of Committee Members
  - Brett Hollenbeck (Chair), Randolph Bucklin, Ashvin Gandhi, Tai Lam, Anand Bodapati