YI LIU

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EDUCATION

The Wharton School, University of Pennsylvania
Ph.D. Student, Marketing 2017 – 2022 (expected)

- Research interests:
  - Substantive: Artificial Intelligence (AI)/Machine Learning (ML) and their applications in marketing
  - Methodological: applied game theory, applied machine learning
- Courses taken: Microeconomic Theory, Research Methods in Marketing, Judgment and Decision Making, Information Processing, Analytical Models in Marketing, Empirical Models in Marketing, Measurement and Data Analysis, Dynamic Programming, Contract Theory, Market Design, Advanced Microeconomics, Modern Data Mining, Empirical Industrial Organization

School of Economics and Management (SEM), Tsinghua University
B.S., Information Management and Information Systems 2017

WORKING PAPERS

- *AI-Enabled Shopping Devices as a Distribution Channel* (with John Zhang and Pinar Yildirim)
- *The Predictive and Economic Values of Teaser Comments: Leveraging NLP Methods* (with Josh Eliashberg)

WORK IN PROGRESS

- *Artificial Intelligence, Social Media, and Hate Content* (with John Zhang and Pinar Yildirim)
- *Adapting Books into Movies: A Machine Learning Perspective* (with Josh Eliashberg)
- *AI-Matching and Influencer Marketing* (with Jessie Liu)

PRESENTATIONS

- The Mack Innovation Doctoral Association (MIDAs) Feb 2019
- George Washington Intelligence of Things (IOT) Conference Apr 2019
- Maryland Marketing Dynamics Conference Jun 2019
- MIT Conference on Digital Experimentation (CODE) Nov 2019
- NABE Tech Economics Conference (TEC) Nov 2019

TEACHING EXPERIENCE

University of Pennsylvania
TA, *Data and Analysis for Marketing Decisions* (undergrad/MBA) Fall 2018, Fall 2019
TA, *Models for Marketing Strategy* (undergrad/MBA) Fall 2019
TA, *Analytical Models in Marketing* (PhD) Spring 2020
Tsinghua University
TA, *Critical Thinking and Moral Reasoning* (undergrad) Fall 2015, Fall 2016, Spring 2016

OTHER RESEARCH EXPERIENCE

Tsinghua University (Department of Marketing, SEM) Beijing, China
Research Assistant Oct 2016 – Jan 2017, Jul 2015 – Aug 2015
University of California, Berkeley (Department of Marketing, Haas Business School)
Research Assistant Jan 2016 – Aug 2016

SELECTED HONORS / FELLOWSHIPS

- Mack Institution Research Grant 2019
- Jiang Nanxiang Scholarship 2016
- Tsinghua Academic Scholarship 2016
- Zheng Weimin Scholarship 2015
- National Scholarship 2015
- Tsinghua Social Work Scholarship 2015
- Tang Lixin Scholarship 2015
- Mitsubishi Corporation Scholarship 2014

ADDITIONAL INFORMATION

Interests

- Calligraphy and Crosstalk (Chinese stand-up comedy)

Computer Skills

- Proficient in C, SQL, R, and Python

Summary of My Interest in AI

I am a PhD student in marketing at the Wharton School, with interest in both theoretical and empirical works. My research focuses on (1) using economic models to understand the impact of AI/machine learning in marketing, and (2) using AI/machine learning to tackle real marketing problems.

For the first stream of my research, I have finished a manuscript in understanding the impact of introducing AI-enabled shopping channels such Amazon's Alexa. Using both experimental evidence and game-theoretical models, we document the fact that consumers' brand preference and AI-channel preference are correlated, and we propose that brands can take advantage of such preference structure to price discriminate, which may affect brands' choice of adopting AI in a competitive environment. I am currently also working on two papers within this stream: one focuses on social media's use of AI in their content moderation, and the other focuses on the use of AI algorithms in matching advertisers and influencers in influencer platforms.

For my another stream of research, I have finished a working paper which applies machine learning methods – specifically, convolutional neural networks (CNN) – to analyze the comments towards movie teaser comments, which can be an early predictor for the performance of the movie. I am also working on another paper which tries to provide suggestions to those who want to adapt a book into a movie. We are comparing the similarity of book and movie synopsis, as well as the reader and moviegoer reviews to generate data-based findings. Machine learning methods involved in this project include Latent Dirichlet Allocation (LDA) and Distributed Representations of Sentences and Documents (Doc2Vec).

I have finished graduate-level courses in both theoretical economic models (e.g., Topics in Game Theory) and AI/machine learning models (Modern Data Mining).