Levin Zhu

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Education

Ph.D. in Marketing (Quantitative, Empirical) Expected Spring 2023
The Fuqua School of Business, Duke University
B.A. in Mathematical Methods in the Social Sciences (MMSS) and Economics 2016
Northwestern University
Honors thesis: "Patterns of Charitable Giving on Kickstarter"
Thesis advisor: Scott Ogawa

Research

Research Interests
Influencer marketing, social media, and social networks
Brand activism and sustainability marketing
Behavioral economics
Causal and interpretable machine learning

Work in Progress
"The Effect of Social Influencers on Brand Demand and Engagement" (with Carl Mela and Tong Guo)
This paper examines the effects of influencer, brand, and consumer characteristics on marketing outcomes using a unique dataset containing rich of influencer, brand, and audience characteristics from a large set of influencer marketing campaigns, across multiple product categories.

Graduate Coursework

Marketing: Quantitative Marketing Proseminar, Special Topics in Quantitative Marketing
Economics: Microeconomics I & II, Econometrics I & II, Dynamic Discrete Choice, Partial Identification: Theory and Applications in Industrial Organization, Psychology and Economics, Causal Inference and Treatment Effects
Statistics: Introduction to Machine Learning, Hierarchical Modeling, Statistical Computation, Missing Data Methods
Other: Bayesian Inference and Decision Theory

Trainings and Workshops Attended

Summer Workshop on Machine Learning May 2019
Tepper School of Business, Carnegie Mellon University
Quantitative Marketing and Structural Econometrics Workshop July 2019
Kellogg School of Management, Northwestern University

Honors and Awards

Doctoral Fellowship, The Fuqua School of Business, Duke University
James B. Duke Fellowship, Duke University

Teaching Experience

Teaching Assistant
The Fuqua School of Business, Duke University
Marketing of Innovations (MBA), taught by Debu Purohit (2019)
Strategy and Tactics of Pricing (MBA), taught by Wilfred Amaldoss (2020)

Instructor
The Fuqua School of Business, Duke University
Mathematics and Microeconomics PhD Summer Camp (2019)

Skills and Languages

Programming languages: R, Python
Natural languages: English (fluent), Chinese (proficient)

My Interest in AI

I am interested in two main areas of AI as it relates to economics and marketing. First, I am interested in how AI can be used by companies to perform certain tasks, such as targeting and product recommendations, better than ever before, and what the implications are. In this regard, I am interested in the following questions. How can academics study, modify, or develop AI techniques to help firms optimize their online marketing strategy? What are the consumer welfare implications of highly predictive AI? Does having better targeting and recommendations necessarily mean better outcomes for consumers? Or do firms, equipped with the power of big data and machine learning, end up exploiting consumers? Understanding this, we might be able to answer how policy can help regulate AI such that firms and consumers may both benefit from this new technology.

Second, there is a recent movement in AI to develop causal and/or interpretable machine learning methods. Machine learning is known to be very accurate in terms of prediction, but it has traditionally been viewed as lacking in achieving causal and counterfactual analysis that humans are capable of reasoning. Furthermore, machine learning is known to operate within a "black box", but understanding what goes on inside that box will be helpful in terms of legitimacy and trust. I would love to learn more about how the fields of economics and marketing can benefit from more recent developments in causal and interpretable machine learning. Questions that are of interest to me here include: How can AI be used to understand causal links and deal with endogeneity? Are there advancements to be made in interpretable machine learning that can help consumers and managers understand how AI methods come to their predictions?