THE HONG KONG POLYTECHNIC UNIVERSITY
DEPARTMENT OF MANAGEMENT AND MARKETING
Departmental Research Seminar

Modeling Creative Selling with Verbal, Vocal, and Visual Features in Streaming Economy: Predictive, Interpretable, and Generative AI
By

Prof. Xueming Luo
Temple University

Date : 17 Nov 2023 (FRI)
Time : 10:30 am – 12 noon
Venue : M802

Abstract

In the context of hyper competitive livestreaming platforms such as Twitch and Tiktok, the creative selling ability of a streamer becomes of unprecedent significance. However, it is challenging to scientifically model streamer creative selling in an automatic, scalable, and theory-consistent manner. This research customizes multimodal transformer-based deep learning algorithms to measure streamer creative selling. Our algorithm outperforms a host of benchmark deep learning models and reveals that it is not only the multimodal representations of lower-level verbal, vocal, and visual features but also their crossmodal interactions (verbal-vocal, verbal-visual, vocal-visual, and verbal-vocal-visual) that are important in capturing creative selling. We validate our algorithm by showing that the predicted creative selling is indeed correlated with the higher-level four theoretical factors of verbal originality and appropriateness, vocal arousal, and visual body motion in an upstream analysis. Further, in a downstream analysis, we validate that streamers who have higher creative selling scores tend to generate more product sales, and interestingly this relationship is amplified for streamers with higher reputation and for hedonic and high-price products. Moreover, a followup field experiment, using ChatGPT to generate videos with exogenous variations, corroborates the causal impact of creative selling on customer responses, providing more external validity of our algorithmic measure of creative selling. Platforms can leverage our algorithm to rank streamers based on creative selling scores for advertising and promotion activities, and streamers can benefit from it by improving their verbal, vocal, and visual cues of creative selling to increase sales outcomes in streaming commerce.

Prof. Xueming Luo is the Charles Gilliland Distinguished Chair Professor of Marketing, Professor of Strategy and MIS, and Founder/ Director of the Global Institute for Artificial Intelligence & Business Analytics in the Fox School of Business at Temple University. His research is quantitative in nature and focuses on integrating artificial intelligence technologies, big data machine learning, econometrical methods, and field experiments to model, explain, and optimize customer experience, company strategies, platform designs, and creator & sharing economy. He is an interdisciplinary thought-leader in leveraging AI/ML algorithms, text/audio/image/video data, and causality inference for digital marketing, mobile targeting, social media analytics, brand activism, and social responsibility. Xueming has worked with leading global companies in mobile communications, banking, e-commerce, health care, education, pharmaceutical, and petroleum industries. His research has been featured by premier journals in Marketing (*MkSc*, *JM*, and *JMR*), Management and Strategy (*MgSc*, *SMJ*, *AMJ*, and *POM*), and Information Systems (*ISR* and *MISQ*). He has been ranked as top 8th worldwide regarding Author Productivity in the Premier Marketing Journals (*JCR*, *JM*, *JMR*, *MKSC*) during 2013-2022. Xueming has over 23,900 citations on Google Scholar and is ranked top 2% researchers worldwide in business by Scopus citations.

All interested are welcome.

THE HONG KONG POLYTECHNIC UNIVERSITY
香港理工大學

Department of
MANAGEMENT
& MARKETING
管理及市場學系