

Poet Ossian Larsen

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EDUCATION

University of Southern California

Doctor of Philosophy in Management- Marketing

Advisor: Davide Proserpio

Los Angeles, CA

August 2020 - (expected) May 2025

University of Wisconsin, Madison

Bachelor of Business Administration

Majors: Statistics; Information Systems **Minors:** Computer Science; Mathematics

Madison, WI

August 2016 - May 2020

RESEARCH INTERESTS

My current research uses empirical methods and analytical models to study digital platforms with a focus on studying the downstream consequences of platform design choices and platform market entry on firms and consumers.

AWARDS & GRANTS

- Institute for Outlier Research in Business (iORB) Research Grant (\$13000, 2023).
- ISMS Early-Stage Dissertation Research Award (\$5000, 2022).
- AMA-Sheth Foundation Doctoral Consortium Fellow, 2024.
- ISMS Marketing Science Doctoral Consortium Fellow, 2023.

WORKING PAPERS

- “The Impact of LLMs on Search Advertising: Evidence from Google’s BERT,” with Davide Proserpio. [[SSRN](#)].

We study how Large Language Models (LLMs) used by search engines to interpret consumer search queries affect sponsored search market auctions. We do so by analyzing changes in the number of bidders and cost-per-click (CPC) per query auction following Google's October 2019 introduction of Bidirectional Encoder Representations from Transformers (BERT). In aggregate, BERT increases auction demand and minimally changes CPC. Motivated by Google's statement that BERT predominantly improved long query interpretation, we analyze how query length moderates the effect of BERT. Despite demand increases across all queries, CPC declines as query length increases. We develop a theoretical auction model to understand the mechanisms driving these findings and make predictions about future algorithm updates. Our results offer insight into the economic impact of AI and LLMs on advertising markets and help advertisers prepare for future algorithm updates.

- “The Role of Ad Clutter in Digital Advertising,” with Sean Melessa & Paul Hoban. (*Revise and Resubmit at Journal of Marketing Research*).
- “The Financial Consequences of Legalized Sports Gambling,” with Davide Proserpio and Brett Hollenbeck. (Pending company name disclosure decision).

WORK IN PROGRESS

- “Sports Gambling Advertising: Effectiveness and Consequences,” *data collection in progress*.

CONFERENCE PRESENTATIONS

“The Impact of LLMs on Search Advertising: Evidence from Google’s BERT”

- Interactive Marketing Research Conference (May 2024).
- UTD BizAI Conference (March 2024).
- ISMS Marketing Science Conference (June 2023).
- California Quantitative Marketing Ph.D. Student Conference (April 2023).
- Indiana University Haring Symposium (April 2023).
- Artificial Intelligence, Machine Learning, and Business Analytics (December 2022).

TEACHING

Marketing Analytics

Undergraduate elective course, University of Southern California.

Instructor

Fall 2023

Teacher rating: 4.6/5

Marketing Analytics

MBA and M.S. in Business Analytics Program, University of Southern California.

Teaching Assistant for Lan Luo

Spring 2023

Teaching Interests: Marketing Analytics, Digital Marketing, Market Research, Research Methods.

PROFESSIONAL EXPERIENCE

Samsung Austin Semiconductor

Data Scientist Intern

Summer 2019

Samsung Austin Semiconductor

Full Stack Developer Intern

Summer 2018

International Game Technology

Data Analyst Intern

Summer 2017

COURSEWORK

Economics

- Microeconomics I
- Econometrics
- Causal Inference
- Theoretical IO
- Game Theory

Jonathan Libgober
Roger Moon
Tom Chang, Florenta Teodoridis
Guofu Tan
Odilon Camara

Statistics and Machine Learning

- Dynamic Programming and Markov Decision Processes
- Mathematical Foundations of Statistical Learning Theory
- Fairness in AI

Paat Rusmevichientong
Mohamed Ndaoud
Kristina Lerman, Fred Morstatter

Marketing and Behavioral Science

- Marketing Models in Consumer and B2B Markets
- Advanced Quantitative Models in Marketing
- Marketing Mix Models
- Structural Modeling and Marketing Strategy
- Consumer Behavior and Decision-Making
- Consumer Behavior Theory and Research

Anthony Dukes, Yanhao Wei
Dina Mayzlin, Sha Yang
Davide Proserpio, Dinesh Puranam
Siddarth Sivaramakrishnan, Gerry Tellis
Joseph Nunes, Kristin Diehl
Joseph Nunes, Joseph Priester

Additional Coursework

- Seminar in Philosophy of Science (Audit)
- Nonlinear Dynamical Systems (Audit)

Porter Williams
P.K Newton

REFERENCES

Davide Proserpio
Associate Professor of Marketing
USC Marshall School of Business
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Dina Mayzlin
Robert E Brooker Professor of Marketing
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Brett Hollenbeck
Associate Professor of Marketing
UCLA Anderson School of Management
Email: brett.hollenbeck@anderson.ucla.edu
Phone Number: 202-641-4536