

Jingpeng Hong

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Summary

Research/Data Scientist at TikTok with 5 years of research and industry experience combining machine/deep learning and causal inference to help firms optimize and automate their business decisions.

Research expertise in online experimentation and marketing measurement.

Proficient in Python (PyTorch, TensorFlow, EconML, scikit-learn), R, SQL, MATLAB, Stata and Git.

Experience

TikTok | Data Scientist, Marketing Science/Measurement 2025 - present

Product Development: End-to-End pipeline to execute concurrent Geolift and Conversion Lift Study

- Productized internal geo-experimentation capabilities by engineering a full-stack toolkit for location targeting monitoring, conversion signal aggregation, ex-ante experimental design and ex-post inference.
- Designed a causal inference tool based on augmented synthetic control to calibrate 500+ large-scale conversion lift studies, establishing the source of truth for engineering iterations.

Research Project: Automated Heterogeneous Treatment Effect Analysis for Brand Lift Study

- Developed a causal forest framework to uncover heterogeneity within the standard average lift report in brand lift studies, providing granular insights for accounts with \$50MM annual spend.
- Scaled the diagnostic pipeline using user-level opportunity and exposure logs, delivering data-backed media tactical recommendations for TikTok's largest global advertisers.

Harvard Business School | Doctoral Researcher in Quantitative Marketing 2022 - 2025

Research Paper: What Is a Customer Worth to Algorithms? [HBS Marketing Seminar 2024]

- Proposed novel interpretable machine learning algorithms to quantify customers' information value using Shapley value, achieving equivalent recommendation accuracy with 50% fewer samples.
- Built robust supervised learning models to denoise conditional average treatment effect estimates and increase the targeting accuracy by 8%.

Research Paper: Beauty in a Spectrum of Sizes: Sales Impact of Advertising Models' Body Shape

[Marketing Science Conference 2024, Conference on Information Systems and Technology 2024 (long presentation)]

- Created a large-scale transaction and clickstream database from web sessions on an e-commerce platform with 1.5 million monthly active users, using cloud storage and SQL for efficient data management.
- Leveraged scalable PyTorch computer vision algorithms to extract interpretable facial characteristics and product features from 160,000 apparel images.
- Applied causal inference models with observational data to demonstrate that featuring inclusive body shapes in advertising increases daily sales by 8.9%.

Education

Harvard University | M.A. Business Economics 2022 - 2025

- *Ph.D. coursework and research in Quantitative Marketing at Harvard Business School*

University of Chicago | M.A. Economics 2021 - 2022

Peking University | B.A. Economics, National School of Development 2017 - 2021

Publications

Long-Term Care Insurance and the Well-Being of Older Adults and Their Families

Xiaoyan Lei, Chen Bai, Jingpeng Hong, and Hong Liu, *Social Science & Medicine*, 2022, 296: 114745 [\[Link\]](#).

Honors & Awards

Marketing Science Doctoral Consortium Fellow (2023, 2024); Harvard GSAS PhD Fellowship (2022 - 2025); Phoenix Research Award Scholarship, UChicago (2021); Peking University Outstanding Graduate (2021); Silver Medal, Chinese Physics Olympiad Final (2017)