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Website: [Google Scholar](#) ◊ [GitHub](#) ◊ [LinkedIn](#) ◊ [Personal Website](#)

Education

University of Wisconsin-Madison	Madison
Ph.D. Candidate in Quantitative Marketing	Sep, 2023 – May, 2028 (expected)
University of Wisconsin-Madison	Madison
M.S. in Computer Sciences	Sep, 2021 – May, 2023
Teikyo University	Tokyo
B.E. in Computer Science	Apr, 2019 – Mar, 2021
University of Tokyo	Tokyo
B.A. in Economics	Apr, 2003 – Mar, 2007

Publication / Working Paper

Published & Revised Work:

[Leveraging Generative AI to Create Visual Content in Digital Advertising](#)

(with R. Daviet)

Marketing Science – *Forthcoming, Citation: 6 on April. 1, 2026*

Generative AI offers vast potential for image synthesis in advertising but poses challenges in maintaining brand compatibility and performance. We address this by proposing a novel creative design process that combines generative AI with two deep Bayesian prediction models. The first model identifies potential high-performance visuals, while the second assesses brand acceptability.

Both models undergo sequential training using optimized batches of creatives to minimize data requirements. We demonstrate the effectiveness of this approach through a field application with an outdoor activity company. The results show that our framework can generate high-performing visuals consistently, bridging the gap between the theoretical potential of GenAI and effective practical application in digital advertising.

[AI-Human Hybrids for Marketing Research: Leveraging LLMs as Collaborators](#)

(with N. Arora and I. Chakraborty)

Journal of Marketing (Vol 89, 2025) – *Published, Citation: 169 on April. 1, 2026*

We propose that a human-LLM hybrid approach leads to significant efficiency and effectiveness gains in the marketing research process. In qualitative research, we show that LLMs can effectively create sample characteristics, generate synthetic respondents, and moderate in-depth interviews. Our results demonstrate that the AI-human hybrid generates information-rich, coherent data that surpasses human-only data in depth and insightfulness.

In quantitative domains, we find that the quality of synthetic data improves significantly through few-shot learning and retrieval-augmented generation (RAG). By collaborating with a Fortune 500 food company to replicate a prior study using GPT-4, we provide experimental evidence that humans and LLMs possess complementary skills, and that the hybrid model consistently outperforms human-only or LLM-only counterparts.

Work in Progress:

The Value of Fit in Micro-Influencer Marketing: A Two-Sided Matching Model with Counterfactual Image Generation (Job Market Paper)

Micro-influencers derive their value from content that resonates with small but highly engaged audiences, yet firms select partners primarily by easily observable metrics such as follower count; they overlook the visual-style congruence between brand and influencer that drives engagement. Observed engagement further confounds two forces: 1) the pair's *inherent visual-style fit* and 2) the influencer's *deliberate content adjustment*, which cannot be separated without modeling content production. This paper develops an empirical framework that jointly models influencer–brand matching process on a micro-influencer platform using proprietary data, decomposes each sponsored post's visual content into inherent fit and strategic adjustment, and estimates how each contributes to engagement.

The estimates reveal that inherent visual-style fit and content adjustment are strategic substitutes. A counterfactual matching increases mean gross engagement by 39.3% while drawing in 59.8% more unique influencers and 43.8% more unique campaigns. A welfare decomposition of the counterfactual net engagement gain shows that action optimization to replace observed content deviations with structurally optimal adjustments under the observed matching accounts for 96.4% of the total improvement, while match reallocation contributes the remaining 3.6%, establishing content over-adjustment as the dominant source of welfare loss. A generative image model, fine-tuned on over one million platform images, produces counterfactual sponsored posts for hypothetical pairs to conduct visual inspection of alternative matches, enriching quantitative insights with actionable visual guidance.

Generative Priors for Conjoint Analysis: Leveraging LLMs for Data-Scarce Estimation

(with N. Arora)

This project addresses the limitations of Hierarchical Bayes (HB) models in data-scarce environments, such as “cold-start” problems for new technologies or B2B contexts. We propose a methodology to leverage LLMs and deep generative models to construct high-quality, informative priors.

Managerial Publications:

Human-AI Hybrids: The New Power in Marketing Research

(with N. Arora and I. Chakraborty)

NIM Marketing Intelligence Review (Vol 18(1), 36-41, 2026)– **Published**

Presentations

2024

- Wisconsin School of business (Symposium on Artificial Intelligence in Marketing)

- Waseda University

Honors and Awards

AMA-Sheth Doctoral Consortium Fellow 2026

Teaching Experiences

University of Wisconsin-Madison

Teaching Assistant for *Foundations of Statistical Learning for Business Analytics* Fall 2025

Teaching Assistant for *Capstone Consulting Practicum* Spring 2023, Spring 2024

Grant

WSB AI Hub for Business Research Grant (with Neeraj Arora), \$7,000 2026

Professional Experiences

Software/Machine Learning Engineer

Aoyama Art, Inc., Tokyo, Japan 2021 - 2022

toridori, Inc., Tokyo, Japan 2021

Product Manager/Project Leader

Mercari Inc., Tokyo 2020 - 2021

Donuts Ltd., Tokyo 2016 - 2017

Chief Operating Officer

Michael Inc., Tokyo 2017 - 2020

Strategic Consultant

YCP Holdings., Tokyo 2013 - 2016

Analyst

Barclays Japan, Tokyo 2011 - 2012

Ministry of Economy, Trade, and Industry., Tokyo 2007 - 2011

Skills

- Numerical Programming: Python, Julia, R
- Analysis: PyTorch, Numpy, Pandas, Botorch, Stan, PyMC
- Software Development: Go, Node.js, Google Apps Script, C, Java, Javascript

- Database/System: SQL, NoSQL, GCP, mongoDB, Linux, AWS
- Tools: BigQuery, Git, GitHub, Google Analytics
- Design: Figma, Adobe XD
- Language: English(Fluent), Japanese(Native)

Last update: April, 2026