ERIC B. ZHOU

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Education

2023 – 2026 (Expected)	**Boston University Questrom School of Business** *Doctoral Candidate in Information Systems* Advisor: Dokyun "DK" Lee	Boston, MA
2021 – 2023	**Washington University in St. Louis Olin Business School** *Master of Science in Business Administration*	St. Louis, MO
2019 – 2021	**Carnegie Mellon University Tepper School of Business** *Master of Business Administration* Business Analytics Track Concentrations in Business Technologies and Operations Research	Pittsburgh, PA
2014 – 2018	**Washington University in St. Louis Olin Business School** *Bachelor of Science in Business Administration* Majors in Marketing and Finance	St. Louis, MO

Research Interests

Topics	Societal consequences of generative AI Computational creativity Human-AI collaboration Economics of unstructured data
Methods	Computer vision Natural language processing Multimodal feature extraction Causal inference

Research

Publications

1. **Zhou, Eric**; Lee, Dokyun. "Generative Artificial Intelligence, Human Creativity, and Art."
Published at Proceedings of the National Academy of Sciences Nexus.
Available at [SSRN] and [PNAS Nexus].

"Recent artificial intelligence (AI) tools have demonstrated their ability to produce outputs traditionally considered creative. One such system is text-to-image generative AI, which automates humans' execution to generate high-quality digital artworks. Utilizing a dataset of over 4 million artworks from more than 50,000 unique users, our research shows that text-to-image AI substantially enhances human creative productivity by 25% and increases the likelihood of receiving a favorite per view by a similar percentage. While peak artwork content novelty (focal objects and object relationships) increases over time, average content novelty declines, suggesting an expanding but inefficient creative space. Additionally, there is a consistent reduction in visual novelty (pixel-level stylistic elements). Importantly, AI-assisted artists who can produce more novel ideas, regardless of overall novelty prior to adoption, produce artworks that their peers evaluate more favorably. The results imply that ideation and likely filtering are necessary skills in the text-to-image process, thus giving rise

to "generative synesthesia" - the harmonious blending of human senses and AI mechanics to discover new creative workflow."

Works in Progress

1. **Zhou, Eric**; Lee, Dokyun; Gu, Bin. Who Expands the Creative Frontier with Generative AI? *Analysis.*

2. **Zhou, Eric**; Lee, Dokyun; Burtch, Gordon. "Human Incumbents vs. Generative Entrants: Strategic Responses to Generative AI in Creative Labor Markets." *Data preparation.*

3. **Zhou, Eric**; Hui, Xiang; Lee, Dokyun. "Economic Value of Image-Based Seller Quality Signals."
   Workshop on Information Systems and Economics (WISE) 2022 Best Student Paper Finalist
   "In online marketplaces, sellers can rely on alternative mechanisms to signal their quality when they lack rich transaction histories. Using scraped data on GPU sales from eBay, we find that certain image signals can substitute for reputation to increase conversion rates amongst sellers with less than 100% positive reputation, and conditional on making a sale, can realize a 5% price premium on average. However, the effects are only significant for less reputable sellers."

Invited Talks

Apr. 2024	**Zhou, Eric;** Lee, Dokyun**. "**Generative Artificial Intelligence, Human Creativity, and Art**."** Cornell Information Science Seminar (virtual)

Conference & Workshop Presentations

Aug. 2024	**Zhou, Eric**; Lee, Dokyun; Gu, Bin. "Who Expands the Creative Frontier with Generative AI?" *Academy of Management Annual Meeting* at Chicago, IL
May 2024	**Zhou, Eric**; Lee, Dokyun; Gu, Bin. "Who Expands the Creative Frontier with Generative AI?" *Wharton AI and the Future of Work* at Philadelphia, PA
Oct. 2023	**Zhou, Eric**; Lee, Dokyun. "Generative Artificial Intelligence, Human Creativity, and Art." *INFORMS Annual Meeting* at Phoenix, AZ
Oct. 2023	**Zhou, Eric**; Lee, Dokyun. "Generative Artificial Intelligence, Human Creativity, and Art." *INFORMS Workshop on Data Science* at Phoenix, AZ
Sep. 2023	**Zhou, Eric**; Lee, Dokyun. "Generative Artificial Intelligence, Human Creativity, and Art." *Wharton Business and Generative AI Workshop* at San Francisco, CA
Dec. 2022	**Zhou, Eric**; Hui, Xiang; Lee, Dokyun. "Economics of Image-Based Seller Quality Signals." *Workshop on Information Systems and Economics (WISE)* at Copenhagen, DK ***Best Student Paper Finalist***
Aug. 2020	Lee, Dokyun; **Zhou, Eric**; Mao, Chengfeng; Kane, Gerald. "Interpretable Machine Learning for Theory Building." *MISQ Author Workshop*, virtual

Professional Service

Ad-hoc reviewer

Information Systems Research
Management Science
Harvard Data Science Review

Teaching Experience

Spring 2023	**DAT 500W: A/B Testing in Business** Heading Teaching Assistant Taught by Xiang Hui and Christopher Mondy

Industry Experience

2021 – Present	**Machine Learning Contractor** *Angel Flights West*	Santa Monica, CA (Remote)
2018 – 2019	**Research Analyst, Product Innovation Analytics** *Nielsen BASES*	Wilton, CT

Skills

Python, PyTorch, HuggingFace, AutoGen, R, LaTeX, SQL, web scraping

Coursework

Fall 2020	Seminar in Business Technologies (neural language models, philosophy & economics of AI)
Fall 2021	Microeconomics I Empirical Methods in Business: Part B (Advanced Econometrics) Seminar in Marketing
Spring 2022	Microeconomics II Causal Inference Analytical Modeling in Marketing: Part A Empirical Methods in Structural Modeling
Fall 2022	Empirical Methods in Business: Part A Seminar in Strategy & Organization Experimental and Behavioral Research Methods: Part A
Spring 2023	Seminar in Strategic Management of Innovation & Technology Seminar in Strategy Independent Study in Strategy: Creativity
Fall 2023	Applied Machine Learning Seminar in Generative AI and Causal Inference with Text
Spring 2024	Seminar in Economics of Information Systems

Awards

May 2024	Questrom Outstanding Research Award
Feb. 2024	Nominated: Falling Walls Science Breakthrough of the Year in Art & Science
Oct. 2023	INFORMS Gold Student Scholarship
Sep. 2023	Questrom School of Business Doctoral Fellowship
Dec. 2022	WISE 2022 Best Student Paper Finalist
Aug. 2021	Olin Business School Doctoral Fellowship
Feb. 2019	Nielsen BASES Client Service Superstar Award