Max (Chengzhao) Tu

Ph.D. Candidate in Marketing, Fisher College of Business, The Ohio State University

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EDUCATION

The Ohio State University, Fisher College of Business (Columbus, OH) Sep 2022 – May 2027 (expected)

Ph.D. in Marketing (Candidate); Minor: Computer Science.

Brown University, School of Public Health (Providence, RI) Sep 2018 – May 2020

Master of Science (Sc.M.) in Biostatistics; 2-year scholarship.

The Ohio State University, College of Arts and Sciences (Columbus, OH) Sep 2015 – May 2018

B.S. in Financial Mathematics; Minor: Statistics; GPA: 3.9/4.0 (Summa Cum Laude; Dean's List all semesters).

RESEARCH INTERESTS

Substantive: Textual analysis, generative AI, consumer heterogeneity, consumer engagement, unstructured data.

Methods: Bayesian models, large language models, Natural language processing, topic modeling, machine learning, Reinforcement learning.

WORKING PAPERS

Chengzhao (Max) Tu, H. Alice Li, and Greg M. Allenby, "*Heterogeneous Supervision of Unstructured Data*."

Under Review at Journal of Marketing Research

- Develop a heterogeneous supervision model that identifies latent customer archetypes accounting for distinct evaluation patterns
- Marketing managers can use this method to segment customers and evaluate product or service attributes from a heterogeneous perspective.

Chengzhao (Max) Tu, Joachim Büschken and Greg M. Allenby, "*Attributes, Evaluations, and Context: Mining the Argumentative Structure of Consumer Reviews with a Syntactic Topic Model.*"

Under Review at Marketing Science

- Develop a syntactic topic model that operates on constituency phrases rather than individual words, using phrase type to modulate the probability of topic change across adjacent phrases.
- Demonstrate that the composition of contextualizing language within a topic shift systematically over time, providing actionable intelligence for service management.

Chengzhao (Max) Tu, H. Alice Li, and Greg M. Allenby, "*What, How, When, and Why: An Interpretable Model of Review Content and Representative Snippets*."

- Develop a generalized Bayesian model integrating valence-aware topic modeling, beta-position weighting, and sentence-function labels to capture the what-how-when-why dimensions of reviews and explain how review structure shapes customer ratings.
- Embed AI reader into the Bayesian model for posterior snippet selection, balancing both rating recovery and information preservation.

WORKS IN PROGRESS

Chengzhao (Max) Tu, "*Shaping Player Engagement Through Win-Rate Dynamics: A Dual Hidden Markov Model for Online Competitive*." Manuscript in preparation (modeling development and data collection completed).

- Develop a dual hidden Markov model to quantify how platform-controlled win-rate dynamics shape user engagement, and to evaluate policy counterfactuals that increase engagement and retention.

TEACHING EXPERIENCE

Instructor, BUSML 4202: Marketing Research (Summer 2024; Summer 2025).

- Overall evaluation: **4.92/5**; Nominated for the Graduate Associate Teaching Award (GATA).

Graduate Teaching Assistant: BUSML 7245 Micro Marketing Data (SP23–SP26); BUSML 7247 Macro Marketing Data (SU25, SU26); BUSOBA 7257 Data Visualization (SP23,SP24).

- Assisted with developing lecture slides, Google Colab coding demos, homework assignments and exams

SELECTED CONFERENCE PRESENTATIONS & SERVICE

CUFE international doctoral forum(2026); Fisher AI Business Conference (2025, Coordinator); AMA–Sheth Doctoral Consortium (2026); Haring Symposium, Indiana University (2024); POMS Conference (2026); AMA Summer (scheduled 2026); 3rd Global PhD Student Forum hosted by Central University of Finance and Economics (scheduled 2026)

PROFESSIONAL EXPERIENCE

Citizens Bank (Providence, RI)

Data Scientist, Full-time/ Intern — Jul 2020 – Apr 2021/ May 2019 – Aug 2019

- Built product recommendation models for commercial customers; developed a sentiment-analysis model for quantifying customer satisfaction; constructed a risk prediction model for customer account closure behavior.

China International Capital Corporation (CICC) (Shanghai, China)

Investment Banking Intern — May 2017 – Aug 2017

REFERENCES

Greg M. Allenby (Advisor), Helen C. Kurtz Chair in Marketing and Professor of Statistics, The Ohio State University — allenby.1@osu.edu

H. Alice Li (Advisor), Associate Professor of Marketing, The Ohio State University — li.815@osu.edu