

Alex P. Miller

CURRICULUM VITAE

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University of Southern California, Marshall School of Business
3670 Trousdale Parkway, Los Angeles, CA 90089

APPOINTMENTS **USC Marshall School of Business**
Assistant Professor
Department of Marketing
Los Angeles, CA; 2021 – *Present*



EDUCATION **The Wharton School, University of Pennsylvania**
Ph.D., Managerial Science & Applied Economics
Department of Operations, Information, & Decisions
Concentration: Information Systems
Philadelphia, PA; 2015-2021 (Awarded 2022)



University of Oregon, Clark Honors College
B.A., Mathematics, *summa cum laude*
Eugene, OR; 2008-2012



INTERESTS A/B testing, causal inference, meta-science, machine learning, algorithmic decision making, personalization, marketing, and online recommendation systems

RESEARCH Working Papers:

- Alex P. Miller & Kartik Hosanagar, “Personalized discount targeting in online retail with technographic data”
- Alex P. Miller & Kartik Hosanagar, “An empirical investigation of *p*-hacking in e-commerce experiments”
- Alex P. Miller & Kartik Hosanagar, “Meta-analysis of e-commerce A/B testing practices”
- Alex P. Miller & Ron Berman, “Test, Target, & Roll: Optimal explore-first contextual targeting in finite populations”
- Kartik Hosanagar & Alex P. Miller, “Improving recommender diversity with probabilistic item selection”

Book Chapters:

- Kartik Hosanagar & Alex P. Miller. “Who Do We Blame for the Filter Bubble? On the Roles of Math, Data, and People in Algorithmic Social Systems”. In K. Werbach (Ed.), *After the Digital Tornado: Networks, Algorithms, Humanity* (pp. 103-121). Cambridge: Cambridge University Press. 2020.
Links: [PDF](#), [HTML](#)

Conference Presentations:

- “Minimax optimal explore-then-commit contextual targeting over finite horizons”. INFORMS Annual Meeting. October 2022. Indianapolis, IN.
- “Personalized discount targeting with causal machine learning”. International Conference on Information Systems (ICIS). December 2020. Virtual Conference. Best Short Paper in Track, 2nd Runner-up.
- “Test, Target, & Roll: Optimal explore-first contextual targeting in finite populations”. Poster Session, Conference on Digital Experimentation (CODE). November 2020. Virtual Conference.
- “A generic framework for estimating optimal discount targeting policies using e-commerce experiments”. Conference on Information Systems & Technology (CIST). November 2020. Virtual Conference.
- “On the estimation and evaluation of personalized pricing policies using e-commerce experiments”. Conference on Statistical Challenges in E-commerce Research (SCECR). Virtual Conference, June 2020.
- “An AI-enabled decision theoretic approach to personalized pricing using online experiments”. Workshop on Experimental & Behavioral Economics in Information Systems (WEBEIS). Los Angeles, CA. May 2020. (*Cancelled due to COVID-19*)
- “Who benefits from personalization? On the distributional effects of personalized pricing in e-commerce”. Winter Conference on Business Analytics (WCBA). March 2020. Snowbird, UT. (*Cancelled due to COVID-19*)
- “A meta-analytic investigation of p -hacking in e-commerce experimentation”. Conference on Information Systems & Technology (CIST). October 2019. Seattle, WA.
- “What is the predictive performance of A/B testing?”. Workshop on Experimental & Behavioral Economics in Information Systems (WEBEIS). May 2019. Minneapolis, MN.
- “How much can firms trust their experiments? An empirical meta-analysis of p -hacking in A/B testing”. Workshop on Information Systems & Economics (WISE). December 2018. San Francisco, CA.
- “An Exploratory Meta-Analysis of E-commerce A/B Testing Practices”. Conference on Information Systems & Technology (CIST). November 2018. Phoenix, AZ. Best Student Paper Award
- “On the detection of p -hacking in experimental meta-analysis”. Conference on Digital Experimentation (CODE@MIT). October 2018. Cambridge, MA.
- “Fairness & Automated Job Screening”. Wharton-INSEAD Doctoral Consortium. September 2018. Fontainebleau, France.
- “What’s best to test? An empirical meta-analysis of e-commerce A/B testing practices”. Conference on Data Science for Business and Economics at Purdue University. May 2018. West Lafayette, IN.

- “Improving Recommender Diversity with Probabilistic Item Selection”. Workshop on Information Systems & Technologies (WITS). December 2017. Seoul, Korea.
- “What’s best to test? An empirical meta-analysis of e-commerce A/B testing practices”. Conference on Digital Experimentation (CODE@MIT). October 2017. Cambridge, MA.
- “Improving Recommender Diversity with Probabilistic Item Selection”. Conference on Information Systems & Technology (CIST). October 2017. Houston, TX.
- “Exploratory Meta-analysis of E-commerce A/B Testing Practices”. Wharton Innovation Doctoral Symposium (WINDS). October 2017. Philadelphia, PA.
- “Does Data Kill Creativity? A Model of Innovation and Analytics in New Product Development”. Wharton-INSEAD Doctoral Consortium. December 2016. Singapore.

TEACHING & INSTRUCTION

- Faculty Instructor, BUAD307 Marketing Fundamentals (undergraduate marketing core), USC Marshall
 - 2022: 161 students
 - 2023: 176 students
- Undergraduate Research Advisor: Gabriel Solis, 2023
- Project Developer, A/B Simulation Tool, 2020-2022
 - Developed interactive, simulation-based web application for instruction on topics A/B testing and reinforcement learning
 - Project funded by Wharton AI for Business and Analytics@Wharton
 - Shipped live to thousands of students through the Wharton Interactive platform.
- Penn Center for Teaching & Learning Graduate Fellowship, 2018-2019
 - *Graduate TA Workshop Spring 2019*. Technology & student engagement in the classroom.
 - *Graduate TA Workshop Fall 2018*. Helping students develop skills for success in college
- Instructor, Wharton Ph.D. Tech Camp, Summer 2017, 2019
 - Developed curriculum for 8-session course on basic programming, data collection, and text processing
 - <https://alxm.im/tech-camp>
- TA, AI for Business, Enabling Technologies (UG, MBA, EMBA)

AWARDS & GRANTS

- Graduate
Wharton AI for Business Research Grant 2020-2021, Analytics@Wharton Research Grant 2020-2021, Mack Institute Research Fellowship 2018, Center on Teaching and Learning Graduate Fellowship 2018, Best Predictive Model - Applied Machine Learning Conference 2018, Baker Retail Center Research Grant 2017, Mack Institute Research Fellowship 2017
- Undergraduate
Oregon Six (top six students in graduating class of ~4,000), Phi Beta Kappa, Distinguished Honors Research Thesis Defense, Mathematics Department Honors, Stevenson Prize, Undergraduate Research Fellowship - Center on Teaching and Learning, Curtis Scholarship

SERVICE & ADMIN.

Reviewer: *Management Science, Marketing Science, Information Systems Research, Management Information Systems Quarterly, Journal of Quantitative Description, International Conference on Information Systems, Wharton Innovation Doctoral Symposium*
Conference Chair: Wharton Innovation Doctoral Symposium (WINDS) 2018

WRITING

- “How Targeted Ads and Dynamic Pricing Can Perpetuate Bias.” 8 November 2019. *Harvard Business Review*. Published in print: Harvard Business Review Special Issue – Winter 2022. [HTML](#)
- “Want Less-Biased Decisions? Use Algorithms.” 26 July 2018. *Harvard Business Review, Digital Article*. [Link: HTML](#)
- “Regulations like GDPR will make Big Tech stronger”. 24 July 2018. *Quartz Ideas*. [Link: HTML](#)
- “What good are business schools anyway?”. 22 June 2018. *Medium Featured Story*. [Link: HTML](#)
- “Why do we care so much about explainable algorithms? In defense of the black box”. 11 January 2018. *Towards Data Science*. [Link: HTML](#)
- “Are machines biased or are we biased against machines?”. 24 May 2016. *Towards Data Science*. [Link: HTML](#)

INDUSTRY EXPERIENCE

*Full Stack Developer, Data Scientist – **SmartyPal*** April 2014 – August 2015
*Digital Marketing Specialist – **Adpearance*** October 2012 – April 2014
Analytics Consultant *Off and on again*