

# Jared Donohue

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[Personal Website](#) | [LinkedIn](#) | [GitHub](#) | [Google Scholar](#)

Product data scientist with eight years at Amazon spanning product experimentation leadership and software engineering, currently working on causal inference research with professors at Columbia Business School.

## EDUCATION

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### Columbia University

*M.S. in Data Science*

New York, NY

Aug. 2024 – Feb. 2026

- Coursework in: Causal Inference, Statistical Inference, Design and Analysis of Online Experiments, Machine Learning, Behavioral Economics, Philosophy of Science (audit)
- Data Science Institute Scholar. Published “Structured dataset of reported cloud seeding activities in the United States (2000–2025) using an LLM” in *Scientific Data*.
- Columbia Build Lab Intern. Instrumented and analyzed product analytics for *MayahDesign.com*

### George Mason University

*B.S. in Computer Science*

Fairfax, VA

Aug. 2012 – Dec. 2016

## WORK EXPERIENCE

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### Columbia Business School

*Research Associate, Experimentation and Causal Inference Projects*

New York, NY

Jan. 2026 – Present

- Implemented difference-in-differences estimators in Python to measure how company-level AI agent adoption is affecting experimentation practices and outcomes.
- Running a Python oTree online experiment to assess human-AI decision-making in AI-assisted coding environments (Cursor-style IDEs).
- Leading meta-analysis of over 200 RCTs to identify capacity-constrained treatment delivery issues (operational dosage) with implications for valid causal inference and experiment design.

### Amazon

*Senior Technical Product Manager, Experimentation Lead – Echo Show*

New York, NY

Mar. 2022 – Jan. 2025

- Founded and led Experiment Review Group for 50+ PMs and engineers, elevating statistical rigor and successfully navigating nuanced experiment designs for A/B/n with 25 variants, overlapping tests, and long-term holdouts.
- Increased Echo Show screen engagement from 0.5% to 2.5% in 9 months through 10 A/B tests on millions of users, personalizing on-screen content and optimizing user interface.
- Reduced Alexa Echo Show voice navigation failures from 1.25% to 0.05% in 9 months through log analysis and ML model changes, verified through online experiments.
- Defined new “visual relevance” metric for Alexa+, built the human annotation workflow, and partnered with engineering teams to improve it from 60% to 94% in 6 months.

### Amazon

*Technical Product Manager, Experimentation Lead – Alexa Answers Website*

Boston, MA

Mar. 2020 – Feb. 2022

- Increased MAU from 5,000 to 40,000 on Alexa Answers website in 12 months through 15 A/B tests on conversion and retention, informed by original quantitative (SQL) and qualitative user research.
- Designed and analyzed multi-channel marketing experiments across mobile, email, and SEO, quantifying causal impacts of personalization on conversion and retention.
- Built scalable ETL pipelines and a self-serve SQL analytics dashboard delivering real-time product health metrics and ad-hoc insights to senior leadership and weekly business reviews.

### Amazon

*Software Development Engineer – Alexa Machine Learning Runtime*

Boston, MA

Mar. 2017 – Feb. 2020

- Designed and built experiment routing service to enable A/B testing of Alexa’s NLU ML model variants at scale.
- Built 20+ full-stack web app features for internal ML lifecycle management system used by 100+ scientists for daily ML model deployments.

## SKILLS

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**Experimentation and Causal Inference:** A/B testing, multivariate A/B/n testing, A/A tests, hypothesis generation, long-term holdouts, switchbacks, frequentist and Bayesian inference, difference-in-differences, regression discontinuity designs, natural experiments (IV)

**Product Analytics:** SQL (window functions, CTEs, performance tuning), Python, R, conversion funnels, engagement and retention analysis, session replay, PostHog, Google Analytics, custom events, behavioral event analysis

**Product Ownership:** owning and meeting executive business goals, cross-functional partnership, experiment readouts and strategy recommendations to executives, user research, UI design

**AI Tools:** AI-assisted coding tools (Cursor, Claude Code), LLM API integration (OpenAI, Anthropic), human annotation workflow design, quality rubrics and inter-annotator agreement, prompt and output quality assessment