Sam M. Young

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Education

University of California, San Diego
    Ph.D., Economics   2017
    M.A., Economics   2012
    Fields: Economics of Education; Public Economics; Labor Economics

University of California, Davis
    B.A., Economics, with Highest Honors   2008
    Phi Beta Kappa

Experience

Amazon/Amazon Web Services   **2017-2025**

Senior Economist in AWS Marketing, Arlington, VA   2023-2025
Economist in AWS Marketing, Arlington, VA   2021-2023

- Estimated causal impacts of AWS marketing actions using experimental and non-experimental methods. Marketing channels studied included paid search, paid social media, and TV advertisements, with marketing budgets exceeding $100MM annually combined.
- Partnered with customer teams to design and analyze A/B experiments studying the incrementality of AWS marketing actions in 1-75 countries over durations of 6-18 weeks.
- Presented findings and recommendations to technical and non-technical audiences with director and VP stakeholders.
- Led a large-scale experiment across 75 countries that estimated paid search incrementality to be ~6x as large as previously believed, helping to increase paid search budget by $6MM the subsequent year.
- Identified heterogeneity in ROI for paid search between geo regions and branded/non-branded keywords. Results motivated reallocation of budget between regions, along with a ~40% increase in non-branded keyword spending.
- Fostered relationships with repeat customer teams to build long-term research agendas across multiple experiments to maximize learnings for long-term strategy.
- Mentored new economists through 1-on-1 meetings and written materials to onboard new hires to the business context of AWS, topic spaces of the team, and methodologies of existing work.

Economist in Student Programs (now known as University Talent Acquisition), Seattle, WA   2019-2021

- Developed models to rank-order universities for recruiting based on applicant quality, applicant quantity, and diversity demographics. Models aggregated 15-20 data inputs to construct a composite score for each school, synthesizing data from Amazon's hiring funnel and public data on student enrollments.
- Produced school "investability scores" that provided scalable and systematic output to help recruiting teams balance tradeoffs between quality/quantity/diversity strengths of individual schools, reducing reliance on ad hoc heuristics.
- Delivered investability scores for 2000+ schools across 6 countries, servicing 12 recruiting pipelines that covered 76% of Student Programs' global recruiting.
- Collaborated with recruiting teams throughout model development to identify pipeline-specific needs and pain points, incorporating feedback into school investment models by reweighting individual data factors.
- Co-built dashboard surfacing school investability scores along with values of individual data inputs to allow recruiting teams to self-serve information from a consolidated source, replacing fragmented dashboards that existed previously.
- Used econometric techniques to estimate effects of investability scores upon recruiting outcomes. Results indicated a 25-30% increase in qualified FTE applications for school newly receiving investment due to the model, while finding no statistically significant negative effects for schools whose investment priority decreased.

Economist in Supply Chain Optimization Technologies, Seattle, WA   2017-2019
- Co-developed customer-facing metrics to help Fulfillment by Amazon (FBA) sellers track and improve inventory management.
- Devised algorithm to set customized storage limits for FBA sellers based on seller history and inventory management, relative to availability of company-wide storage.
- Incorporated feedback from sister teams to ensure limit-setting algorithm balanced cost savings on storage space against unintended consequences on other business priorities.
- Built economic models to estimate the effects of storage limits upon capacity utilization, estimating that limits for just 4% of FBA sellers reduced capacity utilization ~20%, resulting in >$50MM in annual cost savings.
- Co-maintained code base of storage limit algorithm to track version history, ensure up-to-date documentation, and ensure replicability in retrospective analyses.

University of California, San Diego   **2010-2016**

Teaching Assistant   2010-2016
- Explained economic concepts to reinforce student learning via discussion sections, exam reviews, and office hours.
- Facilitated effective design of exams by helping professors compose, proofread, and proctor exams.
- Graded student exams and assignments while providing written feedback.

Instructor ("Associate-In")   2015
- Taught Principles of Macroeconomics as the official instructor.
- Student evaluations: 4.4/5 on 'instructor explains material well;' 92% 'would recommend this instructor.'

Skills

Data Analysis: Extensive training in statistics, regression analysis, causal inference, and estimating treatment effects. Have experience applying these techniques in both controlled experiments (A/B testing) and non-experimental settings. Familiar with essential concepts of machine learning.

Computer: Fluent in Stata, SQL/Redshift, LaTeX, Beamer, Microsoft Office, and internet applications. Basic working proficiency with Git, Python, and UNIX.

Languages: English (native); Mandarin Chinese, Spanish (conversational)

Research

Publications
- **"College Prep for All: Will San Diego Students Meet Challenging New Requirements?"** with Julian R. Betts, Andrew C. Zau, and Karen Volz Bachofer. San Francisco: Public Policy Institute of California, April 2016.

Other Research Papers
- **"Why Don't We Have FIP for Hitters? A Need and Attempt to De-luck Hitter Performance"** Poster presentation at Saber Seminar 2014 in Boston, MA
- **"The Long-Term Effects of Public School Choice: Lottery Evidence from San Diego"** with Julian R. Betts, Andrew C. Zau, and Karen Volz Bachofer
- **"Do Colleges Favor Students from Lower-Achieving High Schools? Evidence from the University of California"**
- **"How Sensitive Are School Value-Added Estimates to Methodology?"** with Julian R. Betts