Niall C. Keleher

Senior Director, Research & Data Science / Ph.D. UC Berkeley

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Experience

Senior Director, Global Research and Data Science — *Innovations for Poverty Action* May 2024 - Present

- Lead a 13-person team of data scientists and research managers supporting design, data collection, and analysis across IPA's portfolio of randomized evaluations and applied data science in 15 countries. Advise teams on experimental design, measurement, power calculations, and causal inference. Established design- and analysis-review processes. Secured and manage $5M in research funding and partnerships with donors and academic institutions.
- Lead IPA's strategy for applying AI and machine learning to evidence generation and measurement. Grew internal Claude adoption from zero to 225 staff and migrated analytics onto a modern cloud stack (Azure, DuckDB/MotherDuck, SQLMesh). Built local-LLM tooling to transcribe open-ended survey responses and anonymize sensitive human-subjects data. Manage core data and AI vendor relationships (SurveyCTO, MotherDuck, Fivetran, Anthropic, Microsoft Azure).

Sr. Data Scientist — *Textio* Nov 2021 - Mar 2024

- Led the architectural design and implementation of end-to-end analytical data warehouse via meltano, sqlmesh, Apache Airflow, DuckDB, Redshift, and PostgreSQL to deliver internal and customer-facing analytics. Intellectual leader on scientific methodology and analytical approaches to data-driven insights for DEIB-tech company. Produced analysis of core product promise to drive sales and marketing with the support of scientific evidence.

Sr. Research Scientist — *Research Improving People's Lives (RIPL)* Aug 2020 - Oct 2021

- Led quantitative research to support design of user-centered applications for governmental partners. Applied tools from causal machine learning to deliver data-driven value added metrics to job seekers considering a career change. Managed and mentored 3 researchers through collaborative code reviews and team presentations.

Lecturer and Postdoctoral Scholar — *Stanford University, Graduate School of Business* Sep 2019 - Jul 2020

- Developed and co-taught course on data-driven impact for MBA and data science students. Managed research teams working on machine learning and causal inference. Led nationally-representative conjoint experiment with 2000 respondents to measure how people value workforce training programs.
- Data Science Scholar, Stanford Data Science Institute (Jan 2020 – Jul 2020).

External Research Consultant — *The World Bank Group* Aug 2015 - Dec 2018

- Produced policy research paper on the use of machine learning for targeting social protection programs. Extracted and transformed JSON database of 500,000 household surveys and performed econometric analysis that helped the Government of Malawi improve national social beneficiary registry. Programmed survey instruments for digital data collection in collaboration with the World Bank and Government of Sierra Leone.

Director of Research Methods and Training — *Innovations for Poverty Action* Jan 2012 - Aug 2014

- Directed global research management at non-profit research organization with more than 200 active randomized controlled trials in 15 countries. Managed and mentored a team of research analysts to develop Stata, Python, and R programs for data collection and primary analysis of field experiments. Advised cross-functional teams on experimental design, power calculations, data collection, measurement strategies, and statistical analysis.

Country Director, Malawi — *Innovations for Poverty Action* Jan 2009 - Dec 2011

- Consulted over 50 governmental, nongovernmental, and private-sector stakeholders on methods of causal inference to assess the impact of programs, policies, and products. Collaborated with academic researchers to design 14 randomized controlled trials, managed a team of 125 staff to collect high-quality survey data, and oversaw daily business operations of a national organization.

Junior Professional Associate, Office of the Chief Economist — *The World Bank Group* Jul 2006 - Aug 2008

- Contributing team member of policy research report with over 2,000 citations on conditional cash transfers.

Selected Publications

- Athey, S., Keleher, N., and Spiess, J. (2025). Machine learning who to nudge: causal vs predictive targeting in a field experiment on student financial aid renewal. *Journal of Econometrics* 249.
- Beaman, L., Keleher, N., Magruder, J., Trachtman, C. (2021). Urban Networks and Targeting: Evidence from Liberia. *AEA Papers and Proceedings* 111: 572–76.
- Beaman, L., Heskowitz, S., Keleher, N., and Magruder, J. (2020). Stay in the Game: A Randomized Controlled Trial of a Sports and Life Skills Program for Vulnerable Youth in Liberia. *Economic Development and Cultural Change*.
- Beaman, L., Keleher, N., Magruder, J. (2018). Do Job Networks Disadvantage Women? Evidence from a Recruitment Experiment in Malawi. *Journal of Labor Economics* 36(1): 121–157.
- Keleher, N., Barela, M.C., Blumenstock, J.E., et al. (2020). Connecting Isolated Communities: Quantitative Evidence on the Adoption of Community Cellular Networks in the Philippines. *ICTD2020*.
- Blumenstock, J.E., Keleher, N., and Reisinger, J. (2016). The premise of local information: Building reliable economic indicators from a decentralized network of contributors. *Proceedings of the Eighth International Conference on Information and Communication Technologies and Development (ICTD 2016)*, 1–5.

Teaching Experience

- Data-Driven Impact (Lecturer), Stanford Graduate School of Business, Spring 2020. Co-Instructor: Susan Athey.
- Software Prototyping for Data Science and Information Management (Lead Instructor), UC Berkeley, Fall 2017.
- History of Information (Graduate Student Instructor), UC Berkeley, Spring 2018 & 2019. Instructors: Paul Duguid and Geoffrey Nunberg. *2018 Outstanding Graduate Student Instructor Award.*
- Core Methods in Data Science (Teaching Assistant), University of Washington, Spring 2016. Instructor: Joshua Blumenstock.

Affiliations

- Institutional Review Board, Board Member, Innovations for Poverty Action (2012–2025)
- Golub Capital Social Impact Lab, Stanford Graduate School of Business (2019–2020)
- Data Intensive Development Lab, UC Berkeley School of Information (2016–2019)
- Peer reviewer: World Bank Economic Review, Journal of Development Economics, Journal of African Economies, NSF, ICTD

Education

Ph.D., Information Management & Systems — *University of California Berkeley* 2014 - 2019

MPA in International Development — *Harvard Kennedy School* 2004 - 2006

B.A., Economics and International Studies (Double Major) — *The Johns Hopkins University* 1999 - 2003

Diploma in International Studies & Economics — *Johns Hopkins SAIS Europe* 2001 - 2002

Skills & Technologies

Technical Skills	Python, SQL, R, ObservableJS, Stata, git, GitHub, Apache Airflow, dbt, SQLMesh, DuckDB, Redshift, and PostgreSQL.
Domain Expertise	Experimental design, Causal inference, A/B Testing, Machine learning, Applied LLMs, Retrieval Augmented Generation, Survey design, Data visualization, Data collection in low-resource settings, Responsible AI deployment, and ETL/ELT.