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As an enthusiastic user of Google products with a strong background in online experimentation, machine learning, causal inference, and computational research, I would be eager to contribute to Google's mission of taking on technology's greatest challenges. In my role as Research Professor, I design and implement research to tackle complex measurement and inference challenges and generate actionable insights for policymakers. As Senior Data Scientist, I hope to use my deep experience developing novel approaches to measure attitudinal and behavioral outcomes across cultures and languages, while doing so in an industry setting where evidence can quickly be used for real-world impact.

I have years of experience communicating technical material to both technical and non-technical audiences and telling stories with data. After moving to UPenn in 2022, my research received nearly \$3.5 million in funding from the U.S. Department of Defense, Agency for International Development, and private foundations. Winning extremely competitive federal grants required me to design high-impact research and communicate the design and results to both technical and non-technical audiences. This included regular presentations to non-technical policy audiences. I further developed these skills teaching [my undergraduate course](#) introducing global development students to causal inference and data science tools and techniques.

My background in measurement and metrics design equips me to conduct research to understand the behaviors of Google's end users. As a Research Professor, I lead a high-profile project that developed a large, highly multilingual media corpus and pioneered the use of large language models (LLMs) in social science research to generate novel data tracking the cross-national incidence of important political events. I further leveraged this data to answer pressing policy questions and develop solutions, including public-facing event monitoring and forecasting systems. Managing a team of data scientists, post-doctoral researchers, I used this data to publish more than a dozen policy reports, develop six public-facing data dashboards averaging 150 hours of monthly active usage time, and attracted 1,200 unique users from 73 countries to our online forecasting system over a 12 month period, with more than 800 policymakers signing up to receive our monthly reports.

I also have deep experience in randomized experiments and causal analyses, including advanced survey experimental research, large-scale randomized control trials in difficult implementation environments including ongoing civil conflict, and spatial approaches to estimating causal effects with observational panel data.

I am proficient in R, including experience with package development and interactive data visualization, and manage teams using Python and NoSQL to organize and maintain original big data corpora. I have produced reports and given invited talks for academic and policy audiences ranging from the Leibniz Center for Informatics to the UN Data Strategy Community and the U.S. Army Special Forces at Fort Liberty.

This deep background in experimental research, cutting-edge natural language processing, and the translation of complex findings into actionable insights aligns with Google's efforts to bring scientific excellence and statistical methods to the challenges of product creation.

While I enjoy my academic position tremendously, much of what I love most about the research process would be more valuable in an industry setting. My academic position has given me years of experience working closely with policymakers to generate and communicate tailored evidence to inform important policy decisions. However, as an outside researcher, my ability to push for evidence-based policy change or the adoption of new measurement approaches within relevant government agencies has been limited. At Google, I hope to develop new methodologies and insights that are rapidly converted into actions that benefit both Google and its users.