

Dear Hiring Committee,

I am writing to apply for the Postdoctoral Associate position at the MIT Governance Lab.

I am a current PhD Candidate in Political Science at UC Berkeley. I am a methodologist, and advised across the Political Science and Statistics departments.

My primary area of research is at the intersection of causal inference and machine learning. How can we use machine learning tools to better design experiments? How can we making algorithmic decisions fairer under limited information? How should we think about AI regulation? And what do AI tools actually do? These are questions I have been working on as part of my research. I am interested in both the social implications of machine learning and AI, and in basic research on the technology itself.

I have solo-authored work on Generative AI published at EMNLP, a major NLP conference, and solo-authored work forthcoming in *Research & Politics* on replication incentives. I have also collaborated with CS researchers on the experimental evaluation of RL agents in a dynamic energy pricing problem. My dissertation project uses modern optimization tools to consider the problem of site selection when a researcher faces a population of potential experimental sites.

I am a member of the [AI and Philosophy lab](#), jointly run by Alexander Tolbert (Emory) and Emily Diana (CMU), which focusses on the application of machine learning and AI to problems of social interest. We are collaborating on two projects in causal inference and algorithmic fairness. The first project consider situations in which we are interested in the causal effect of race, when only a proxy of racial identity is observed. The second considers designing an optimal subsidy scheme to increase loan application approval rates among minority applicants. Our goal is to submit this work at Foundations of Responsible Computing (non-archival) and to FAccT.

During the PhD, I interned at Apple as a Machine Learning Research Scientist, in the Health AI team. I worked on a project using causal inference and machine learning methods to predict atrial fibrillation events among Apple Watch users.

Before the PhD, I worked as a financial journalist for three years in Abu Dhabi, where I covered macroeconomics and oil markets. This essentially involved fieldwork in a country outside the global majority: I did a lot of shoe-leather reporting and elite interviewing, as well as reporting on financial and economic data. I have extensive writing experience, and am familiar with the challenges of communicating technical details to non-expert audiences.

I have also been developing a reading list for a class on regulation, institutions and AI, which could serve as a the basis for an upper-division undergraduate class.

I am excited about the work of the GOV/LAB, which gels neatly with academic interests and goals as a researcher at the intersection of Political Science and Computer Science.

Yours sincerely,

Adam Bouyamourn