Digital Economics and AI Tutorial Application

Contact information:

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Graduate study:

Year of PhD program enrollment: 2021

I'm a 4th-year PhD student in Quantitative Marketing at Boston University, advised by Garrett Johnson.

My coursework spans multiple disciplines, including Economics, Quantitative Marketing, and Computer Science. Specifically, I have completed series courses in econometrics, microeconomics, as well as CS courses such as natural language processing and computer vision. In addition to this core curriculum, I had the opportunity to participate in several PhD seminar courses across the Greater Boston area. These seminars were led by distinguished professors such as Dean Eckles, Shane Greenstein, and Catherine Tucker, further enriching my interdisciplinary training in the fields of digital economics and AI.

Research interests and projects in process:

My research focuses on digital economics, particularly in areas such as digital advertising, privacy, generative AI, and new technology. I am advised by Professor Garrett Johnson, and work with professors Tesary Lin and Shunto Kobayashi at BU.

Currently, I am working on several projects within the field of digital economics and AI. One of my ongoing projects explores whether privacy-focused self-regulation can sustain publisher ad revenue while delivering value to advertisers, without relying on cross-site user identifiers. In this project, we leverage an industry-wide field experiment conducted by Google and the UK Competition and Markets Authority (CMA) in 2024. This experiment presents a unique opportunity for researchers and regulators to assess the impact of Privacy-Enhanced Technologies (PETs) on both user privacy and the business performance of advertisers and publishers.

Specifically, the experiment evaluates the real-world performance of Google's Privacy Sandbox suite, including technologies such as the Topics API, which generates interest-based categories on the user's device, and the Protected Audience API, which facilitates retargeting by conducting ad transactions on the user's device without sharing cookie identifiers externally.

The Google-CMA experiment encompasses 2% of global Chrome users and billions of ad impressions. Previous research has shown that the removal of third-party cookies significantly reduces publisher revenue. Our objective is to assess whether Privacy Sandbox can offset this loss while improving consumer privacy. Preliminary analysis suggests that eliminating browser cookies leads to a 28% reduction in publisher revenue per impression, while Privacy Sandbox reduces this impact to a 25% decline. We have introduced the concept of a "recovery share" to measure how much of the revenue lost from third-party cookie removal is recovered by Privacy Sandbox, with initial findings indicating a recovery share of 11%.

Conclusion:

I find that the topics of this tutorial align closely with my research interests. I am eager to extend my knowledge from Professor Tucker's Economics and AI seminar this Fall at Sloan and learn more from the leading scholars in the field during the upcoming February tutorial.