Contact Information: Guy Aridor, Email: g.aridor@columbia.edu

Course of study:

PhD, Economics from Columbia University (currently in 5th year)

2nd year Fields: Industrial Organization, Microeconomic Theory, Behavioral Economics

BA, Computer Science, Economics, Pure/Applied Mathematics - Boston University

Research Interests: My current research tries to further our understanding of the economics of data and its role in the digital economy. In particular, I study questions focused around the acquisition of data (experimentation, privacy), the usage of data by firms (recommender systems), and how the technologies that make use of data-based innovations influence consumer behavior.

Tentative dissertation title: Essays on the Economics of Data
Tentative Committee: Yeon-Koo Che, Tobias Salz, Michael Woodford, Matt Backus

My dissertation will contain some subset of the following research projects:
The Effect of Privacy Regulation on the Data Industry: Empirical Evidence from GDPR (w/ Yeon-Koo Che, Tobias Salz)
Short abstract: We empirically study how the GDPR's consent mandate impacted the data collected by firms and how this impacts their ability to accrue advertising revenues and predict consumer behavior.

Mergers in Attention Markets [data collection in progress]
Short abstract: How do we define relevant markets and conduct horizontal merger analysis in "zero-price" attention markets? I run a field experiment where I comprehensively collect data on time usage of individuals and randomize restrictions of mobile phone applications. I use this data to construct relevant market definitions for "zero-price" attention markets as well as estimate a structural model of consumer time allocation and corresponding merger analysis.

Recommenders' Originals: Integrated Recommender Systems and Vertical Foreclosure (w/ Duarte Goncalves)
Short abstract: We study a model of strategic interaction between producers and a monopolist platform that employs a recommender system. We characterize the consumer welfare implications of the platform's entry into the production market as well as the equilibrium effects of various policy remedies. Currently revise & resubmit at the *International Journal of Industrial Organization.*

Competing Bandits: The Perils of Exploration under Competition (w/ Yishay Mansour, Alex Slivkins, Steven Wu)
Short abstract: We study whether competition incentivizes the adoption of better learning algorithms. We relate our model to the debate about "data feedback loops" and whether data can serve as a barrier to entry in online markets. A preliminary version of this paper appeared as an extended abstract at *2019 ACM Conference on Economics and Computation.*

Deconstructing the Filter Bubble: User Decision-Making and Recommender Systems (w/ Duarte Goncalves, Shan Sikdar)
Short abstract: We study a simple model of user decision making in the context of recommender systems that rationalizes empirical results on "filter bubble" effects. We discuss the implications of our model for recommender system design and evaluation. Published in the *Proceedings of the 2020 ACM Conference on Recommender Systems.*

The Value of Recommender Systems: Decomposing the Informational and Discovery Gains (w/ Duarte Goncalves, Ruoyan Kong, Joseph Konstan) [data collection starting soon]
Short abstract: We run a field experiment on a movie recommendation platform where we experimentally manipulate the set of recommendations provided to users over time and track how their beliefs about movies changes over time. This will allow us to decompose the mechanisms that drive the influence of recommender systems.

Adaptive Efficient Coding: A Variational Auto-Encoder Approach (w/ Francesco Grechi, Michael Woodford)
Short abstract: We study a model of efficient neural coding based on the structure of a variational auto-encoder. We demonstrate that our model can rationalize existing empirical evidence on perceptual discrimination thresholds. Additionally, our model makes predictions about the nature of adaptation in a changing environment.