NBER Digital Economics and AI Tutorial Application

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Since starting my Ph.D. program in Applied Economics and Management at Cornell University in 2021, I have completed three years of graduate coursework. To fulfill our Ph.D. program requirement, I have taken Ph.D. level *microeconomics*, *macroeconomics*, *mathematical economics*, *applied microeconomics*, *game theory*, *general equilibrium*, three-semester *econometrics*. In addition, I have taken other methodology courses, including *dynamic optimization*, *topics in machine learning and econometrics*, *graduate Industrial Organization*. Moreover, related to digital economics, I have taken courses such as *digital marketing*, *AI strategy and applications*, and other Ph.D. seminars and workshops in the field of digital economics. I also have been TA for *digital platform strategy* for Professor Chris Forman for three years and for *digital business strategy* for Professor Aija Leiponen.

My research interest lies in the topic on the impact of digitization and IT adoption, especially how they affect socio-economic outcomes, such as labor mobility, individual decision-making process, etc.

One stream focuses on digital platform, which includes three projects. The first one studies whether and how Wikipedia affects judicial reasoning, which is forthcoming at *Information Systems Research*. The second one focuses on the role digitization plays in the consumer decision-making process. In specific, we explore the potential effects of the interaction of state-dependence term (consumer inertia behavior) and online consumer reviews on purchasing decisions at an individual level. Combining an individual-level GPS location tracking data and Yelp dataset in Boston from January 1, 2019 to February 29, 2020, we apply a discrete choice model to investigate the joint effects of consumer inertia and online consumer reviews. The granular level data allows us to observe consumption behavior patterns at an individual level. Our preliminary findings show that (1) online reviews matter more for consumers who have been to a focal restaurant, indicating the persuasive effect of online reviews, instead of an awareness effect, (2) recent online reviews significantly matter in the consumer decision-making process, (3) recent online reviews do

not help much for consumers who have been to the focal restaurant recently, suggesting that consumers' own consumption experience could be a substitution for online reviews as a source of information to learn the restaurant quality. Overall, this study not only sheds light on the online and offline interaction in consumer decision-making process but also provides business owners with an implementable consumption history strategy to improve the effectiveness of utilizing online reviews. The third one is trying to understand whether and how discrimination will be mitigated by regulating professional players in the sharing economy. To fill in the gap in the existing literature, our research contributes in two main aspects. First, although the fact of racial discrimination on both host and consumer sides has been documented in the sharing economy, there is little known about whether and how regulating professional players affect such discrimination. Second, the majority of previous literature focuses on the short-run effect. In contrast, we argue that the market would be different in the long run, and thus, will have different implications for minority hosts in the sharing economy.

Another stream of my research focuses on the impact of technology, which includes two projects. The first one utilizes the LEHD data in the Census data to understand the whether and how e-commerce affects labor inflow and labor outflow, especially the individual characteristics of those inflow and outflow. The second one combines a self-built algorithm improvment database and all academic papers from OpenAlex to quantify the impact of algorithm on the novelty of science.

We hope that our findings by next spring will contribute to the discussion with professors and graduate students in the Digital Economics and AI Tutorial. The tutorial provides substantial exposure to frontier research in digital economics and AI, while allowing me to interact with colleagues and researchers in related areas, which would be of great value to my own study and research. I am sincerely looking forward to the opportunity to join this prominent event in the Economics of Digitization and AI.