Application for NBER Digital Economics and AI Tutorial

Ramtin Salamat

To whom it may concern,

I am writing to express my interest in the NBER Digital Economics and AI Tutorial. I am a fourth-year PhD candidate in Managerial Economics and Strategy at the Kellogg School of Management, Northwestern University. My current research agenda focuses on the economics of artificial intelligence, building on my work in mechanism design and contract theory. My dissertation committee consists of Luis Rayo, Piotr Dworczak, Alessandro Pavan, and James Schummer.

Research. In an ongoing project, *Training Your AI Replacement: Severance Pay and Limited Commitment*, my coauthor and I study a contracting problem in which workers can train an AI. Training the AI can increase workers' productivity and improve their performance on the job, but it can also make the AI a better substitute for them. This creates a dynamic incentive problem for workers: sharing their knowledge creates value today but may increase the risk that they are replaced in the future. The firm benefits from AI improvement but cannot commit ex ante to retaining the worker.

We study whether contracting can mitigate this incentive problem, focusing initially on severance payments. We show that severance can protect workers and encourage them to train the AI in some environments, but that it has important limitations when the firm cannot commit to future employment decisions. More broadly, we are interested in what kinds of contracts and institutions can support productive knowledge transfer while protecting workers from the displacement risk created by the technology they help improve. We are extending the project to study alternative compensation arrangements, individual versus collective bargaining, and the role of unions and regulation.

In complementary work, I study the regulation and auditing of AI systems. The project separates the economic decisions involved in AI development and deployment. A developer chooses how capable to make a system and how much to invest in safety, testing, and monitoring, while a firm or other user decides how much authority to delegate to the AI. Greater capability and delegation can generate substantial gains, while some of the resulting risks may be borne by workers, customers, other firms, or the public.

The regulatory problem is complicated by an information asymmetry: developers typically know much more than regulators about how a system was trained, what safety investments were made, and what weaknesses or failures have been discovered. I am interested in whether regulation should operate upstream, at the development stage, or downstream, at the deployment stage, and how auditing changes the incentives of developers and users. More broadly, I want to understand when private incentives distort choices of capability, safety investment, and delegation, and how regulation can improve outcomes while preserving the gains from AI adoption.

Research Background and Preparation. My training combines graduate coursework in economics and computer science with an earlier background in engineering. My previous research is grounded in mechanism design, contract theory, and information economics. This work includes *Trial Plans as a Means of Price Discrimination*, published in *Games and Economic Behavior* in 2025, which studies how product trials can screen consumers through differences in their value for information; *Optimal Mechanisms with Hierarchically Interdependent Values*, under review at *Econometrica*, which studies mechanism design when one agent's private information also affects

other agents' values; joint work on *Sequential Inventory Allocation with Incentive Compatibility*, which studies truthful allocation of scarce resources when demand is private and monetary transfers are unavailable; and, joint work on *What's on the Menu? Consumption Externalities and Product Quality*, where we study pricing and product design when positive network externalities create both screening and coordination problems. Together, these projects provide the theoretical foundation for my current work on the economics of AI.

Closing Remarks. The NBER Digital Economics and AI Tutorial is especially timely for me because my research agenda is focused on AI, while my previous work has given me a strong foundation in microeconomic theory. The tutorial would allow me to connect my theoretical work to the rapidly developing literature on AI adoption, organizational change, productivity, and regulation. I would particularly value the opportunity to learn from researchers working at the frontier of these questions, engage with other PhD students working on related topics, and use those insights to shape the next stage of my dissertation research.

Thank you for considering my application.

Sincerely,
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Education

PhD, Kellogg School of Management, Northwestern University, Evanston 2023 - 2028
Major: Managerial Economics and Strategy

Master of Arts, Department of Economics, University of Toronto, Toronto 2021 - 2023
Major: Economics

Master of Science, Teias Institute, Khatam University, Tehran 2018 - 2021
Major: Theoretical Economics

Bachelor of Science, Sharif University of Technology, Tehran 2014 - 2018
Major: Electrical Engineering

Publications

Trial Plans as a Means of Price Discrimination
Games and Economic Behavior, 2025, 153: 679–701. https://doi.org/10.1016/j.geb.2025.08.010

Working Papers

Optimal Mechanisms with Hierarchically Interdependent Values
https://dx.doi.org/10.2139/ssrn.6608939

Work in Progress

Sequential Inventory Allocation with Incentive Compatibility (with Sean Sinclair & Seyed Iravani)

Training your AI replacement: Severance Pay and Limited Commitment (with Aidan Goth)

What's on the Menu? Consumption Externalities and Product Quality
(with Sarit Markovich & Luis Rayo)

Regulating Artificial Intelligence under Misalignment

Fellowships and Awards

Northwestern TGS Dissertation Proposal Development Fellowship 2026

Kellogg School of Management Doctoral Fellowship 2023 – present

University of Toronto Fellowship 2021 – 2022

Professional Experience

Cafe Bazaar, Tehran, Iran – Auction & Algorithm Designer Jan. 2021 - Aug. 2021

Tapsi, Tehran, Iran – Economist Intern June 2019 - Sep. 2019

EVTech, Tehran, Iran – Co-founder/Technical Director Sep. 2016 - Jan. 2018