

Sijie Lin

Address:

Rotman School of Management
University of Toronto
105 St. George St.
Toronto, Ontario
M5S 3E6, Canada

Phone: +1-647-570-3578**Email:** sijie.lin@mail.utoronto.ca**Website:** www.sijie-lin.com

Research Interests: Industrial Organization, Artificial Intelligence, Applied Microeconomics

EDUCATION

Ph.D. in Economics, University of Toronto 2026 (Expected)
Committee: Matthew Mitchell (co-supervisor), Heski Bar-Isaac (co-supervisor)
Avi Goldfarb, Ambarish Chandra

M.A in Economics, University of Toronto 2020

B.A in Economics, Fudan University 2019

WORKING PAPERS

[Learning to Prompt: Human Adaptation in Production with Generative AI](#) (JMP)

[Hiding From Generative AI](#), R&R at **Quantitative Economics**

WORK IN PROGRESS

Knowledge Spillovers in the Diffusion of Generative AI

Do Human Users Correct AI-Created Stereotypes?

with Ruiqi Sun (University of Hong Kong) and Siyuan Liu (University of Toronto)

Platforms in Platform

AWARDS AND GRANTS

CREATE for Accelerated Discovery (AccelD) Stipend Award, University of Toronto 2025

TD MDAL Grant, Rotman School of Management, University of Toronto 2025

TD MDAL Grant, Rotman School of Management, University of Toronto 2024

University of Toronto Doctoral Fellowship 2020 - 2025

CONFERENCE PRESENTATIONS

TSE Digital Economics Conference (Toulouse)	2025
North American Summer Meeting of Econometric Society (Nashville)	2024
ESIF Economics and AI+ML Meeting of Econometric Society (Ithaca)	2024
European Economic Association Annual Meeting (Rotterdam)	2024
American Law and Economics Annual Meeting (Ann Arbor)	2024
Canadian Economics Association Annual Meeting (Toronto)	2024

PROFESSIONAL EXPERIENCE

Research Assistant for Professor Heski Bar-Isaac 2023

Research Assistant for Professor Aradhya Sood 2023

Course Instructor: University of Toronto 2023
ECO 316: Applied Game Theory

Teaching Assistant: University of Toronto 2019 - 2025
Undergraduate: Industrial Organization; Quantitative Methods in Economics;
Topics in Price Theory; Principles of Macroeconomics; Behavioral and Experimental
Economics; Labor Economics

MBA: Decision Making with Models & Data; Microeconomics; Python for Business

COMPUTER SKILLS

Python, STATA, MATLAB, LaTeX, Cloud Computing

REFERENCES

Matthew Mitchell
Rotman School of Management
University of Toronto
105 St. George St.
Toronto, Ontario
M5S 3E6, Canada
matthew.mitchell@rotman.utoronto.ca

Heski Bar-Isaac
Rotman School of Management
University of Toronto
105 St. George St.
Toronto, Ontario
M5S 3E6, Canada
heski.bar.isaac@rotman.utoronto.ca

Avi Goldfarb
Rotman School of Management
University of Toronto
105 St. George St.
Toronto, Ontario
M5S 3E6, Canada
avi.goldfarb@rotman.utoronto.ca

Ambarish Chandra
Rotman School of Management
University of Toronto
105 St. George St.
Toronto, Ontario
M5S 3E6, Canada
ambarish.chandra@rotman.utoronto.ca

Abstracts

Learning to Prompt: Human Adaptation in Production with Generative AI (Job Market Paper)

What is the role of human input in AI-assisted production? Humans interact with generative AI through combinations of words called prompts. A key feature of *human* input is *adaptation*: users dynamically modify their prompts based on their understanding of AI. I empirically investigate two types of adaptation: (1) adaptation to new AI versions, referring to how people change their prompts in response to AI upgrades; (2) adaptation to outputs from previous prompts, referring to how people adjust their prompts iteratively to converge on desired outcomes. I study this adaptation using prompt-level data from Midjourney, a leading AI image generator. First, users adapt to AI upgrades by writing different words in their prompts. By submitting prompts written for the old version to the new AI and vice versa, I decompose the output shifts as arising from prompt changes (73%), AI changes (20%), and a residual (7%), implying complementarity between AI and human inputs. Second, prompts evolve within the creative process of an artwork. I estimate a structural model of the creative process using the sequential search framework. Counterfactual shows that without human adaptation, users need three times more prompts to achieve data-observed results. Both results highlight the importance of human judgment and adaptation in the creative process.

Hiding From Generative AI

How does generative Artificial Intelligence (AI) change the behaviors of content creators? I investigate the effect of an AI image generator on artists' incentives to publish artworks using data from an online art platform, DeviantArt. On November 11 2022, DeviantArt introduced a generative AI image generator into the platform and artworks on this platform entered training data by default. Using a difference-in-differences estimation with artists who do not use AI, I show that digital artists publish 21% fewer artworks following AI's introduction on this platform, in contrast to artisan crafts artists. This reduction could potentially hinder knowledge spillovers to other artists and AI training data availability. By matching the artworks of artists who publish both on DeviantArt and Instagram, I find that despite artists publishing fewer artworks on DeviantArt, the quality of published artworks for a given artist remains the same after the introduction of AI.