ABDOLLAH FARHOODI

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EMPLOYMENT

University of Toronto *2020—present*
Assistant Professor, Department of Economics

EDUCATION

University of Illinois at Urbana-Champaign *2014—2020*
Ph.D. Economics, Advisor: Dan Bernhardt

Sharif University of Technology *2012*
M.Sc. Economics

University of Tehran *2009*
B.Sc. Electrical Engineering (Control)

SUMMARY

I am an applied economist specializing in industrial organization, digital economics, and the spatial distribution of economic activities. My research involves using big-data tools, structural estimation, and machine learning techniques to address economic questions.

WORKING PAPERS

Democratizing the Opportunities: Who Benefits from the Airbnb Market?

– Developing a novel discrete choice model to account for heterogeneities in Airbnb

– Estimating a structural model to find consumer and producer surpluses with daily variations

– Simulating an agent-based model of the Airbnb market to study the causal effects of different regulation policies

Does Airbnb Reduce Matching Frictions in the Housing Market? (with Nazanin Khazra and Peter Christensen)

– Introducing reduction in matching frictions as a new mechanism through which peer-to-peer markets affect the related markets

– Calibrating our search and matching model using Airbnb and housing data for the entire US

– Applying causal machine learning to study the heterogeneity in the effect of Airbnb on the housing market

Households Mobility and Housing Affordability: Evidence from the Universe of Households' Migration in the US (with Nathaniel Baum-Snow and Lu Han)

– Using the big data on the last 10 movements of all American households ($\sim$3 Billion observations)

– Developing a dynamic discrete choice model of households' location choices

– Developing a new technique to estimate the neighborhood-level moving costs of renters and owners

– Running the counter-factual analysis of changes in moving costs and housing supply policies

Introducing a Micro-Founded Index of Consumption Welfare: A Big Data Approach

- Applying machine learning to introduce a novel index of welfare based on households' asset ownership
- Using the household-level micro-date to evaluate the index

RELEVANT EXPERIENCE

International Monetary Fund

- Fund Internship Program (Statistics Department) *Summer 2018*
- Working on the living standard measurement survey micro-data

University of Illinois

- Big-Data in Environmental Economics and Policy Research Group *2018—2020*
  - Collaborating with the National Center for Supercomputing Applications
  - Working with a large interdisciplinary research team
- Graduate Research Assistant *2015—2018*

TEACHING & LEADERSHIP EXPERIENCE

Urban Economics *University of Toronto, 2021—2024*

Big Data Tools and Applied Machine Learning for Economists *University of Oxford, 2023*

- University of Toronto summer program hosted by the University of Oxford

Big Data Tools for Economists *University of Toronto, 2020*

- Topics: Coding with Python, Git, Data Visualization, Geo-coding and Mapping, Satellite Data, Web-scraping, Textual Analysis, Machine Learning

Introduction to Microeconomics *University of Toronto, 2020—2023*

- Leading more than 1800 students & 30 Teaching Assistants

Applied Machine Learning in Economics *University of Illinois, 2019—2020*

- Topics: Statistical Learning with R, Shrinkage Methods, Random Forest, Bagging, Boosting, XGBoost, SVM, Neural Networks, Causal Inference with ML
- Outstanding rating (top 5 percent) in the "List of Teachers Ranked as Excellent by Their Students"

Teaching Assistant:

- Introduction to Microeconomics University of Illinois, 2016—2018
- Intermediate Microeconomics University of Illinois, 2014—2015
- Game Theory Sharif University of Technology, 2012
- Econometrics I Sharif University of Technology, 2010, 2011
- Microeconomics II Sharif University of Technology, 2010

REFEREED CONFERENCE PRESENTATIONS

- 58th Canadian Economic Association Conference, 13th European Meeting of the Urban Economics Association 2024
- 17th North American Meeting of the Urban Economics Association 2023
- The American Real Estate and Urban Economics Association-ASSA, Canadian Conference in Real Estate and Urban Economics 2022
- 15th North American Meeting of the Urban Economics Association, The American Real Estate and Urban Economics Association-National 2021

FELLOWSHIP AND AWARDS

Robert Willis Harbeson Memorial Dissertation Award	May 2019
University of Illinois Summer Research Fellowship	Summer 2018
University of Illinois Summer Research Fellowship	Summer 2015
University of Illinois Economics Department Fellowship	Fall, Spring 2014
Awarded in the "List of Teachers Ranked as Excellent by their Students"	2016–2020 (7 Semesters)
University of Illinois Graduate Teaching Certificate	May 2019

SOFTWARE AND COMPUTER SKILLS

Programming: R, Python, MATLAB, STATA, Mathematica, HTML

Big-Data Tools: SQL, MongoDB, Hadoop, Spark, Tensorflow

Causal ML: Doubly Robust ML, Elastic-Net Synthetic Control, Generalized Random Forest, Deep-IV, EconML, DoubleML, DoWhy

Machine Learning: Shrinkage Methods, Random Forest, Bagging, Boosting, XGBoost, SVM, Neural Networks

Econometrics: A/B Testing and Randomized Controlled Trials, Difference-in-Difference, Heterogeneous Treatment Effect, Instrumental Variable, Propensity Score Matching, Synthetic Control, Structural Estimation, Discrete Choice Models, Maximum Simulated Likelihood, Method of Simulated Moments

Other: GitHub, Microsoft Office, Visual Studio Code, LaTeX, Satellite Data, GIS, Web-scraping, Textual Analysis

REFERENCES

Daniel Bernhardt, danber@illinois.com
- Professor, Department of Economics, University of Illinois

Nathaniel Baum-Snow, Nate.Baum.Snow@Rotman.Utoronto.Ca
- Professor, Rotman School of Management, University of Toronto

Lu Han, lu.han@wisc.edu
- Professor, Wisconsin School of Business, University of Wisconsin-Madison