

Pedro Masi

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U.S Permanent Resident (Green Card Holder)

- [LinkedIn](#)
- [Website](#)

EDUCATION

University of Tennessee, Knoxville PhD in Business Analytics and Statistics	<i>July-2023 - Present</i>
Vrije Universiteit Amsterdam M.S in Finance and Technology	<i>Aug-2020 - Dec-2021</i>
Kansas State University M.S in Agricultural Economics	<i>Aug-2017 - May-2019</i>
Kansas State University BA in Agricultural Economics	<i>Aug-2011 - May-2015</i>

RESEARCH INTERESTS

My research lies at the intersection of AI and causal inference. I apply text mining and embedding techniques to measure technology adoption and its impact on labor and financial outcomes. I convert unstructured patent and job posting text into structured representations that feed into econometric models to estimate the effects of AI exposure on skill value and firm capital investments.

Keywords: • Machine Learning • Representation Learning • NLP • Causal Inference • Reinforcement Learning

WORKING PAPERS

Masi Pedro, Yuanyang Liu, and Chuanren Liu. “AI Upskilling: Decoupling Skill Demand and Skill Premium” **Revise and Resubmit (Major Revision)** at *Information Systems Research (ISR)*.

Masi Pedro, Howard Zhong, Yuanyang Liu, and Chuanren Liu. “AI Skill Herding and Capital Investment: When Does Following the Crowd Pay Off?” **In preparation for submission** to *Management Information Systems Quarterly (MISQ)*

PAPERS IN PROGRESS

Masi Pedro, Yuanyang Liu, and Chuanren Liu. “**Decoding AI Innovation: A Transformer-Based Approach to Patent Landscaping**” In preparation for submission

CONFERENCE PRESENTATIONS AND INVITED TALKS

- “AI Skill Herding and Capital Investment: When Does Following the Crowd Pay Off?”
 1. Accepted (presentation forthcoming), @ Americas’ Conference on Information Systems (AM-CIS), Reno, NV, August 2026
 2. Accepted, @ Computational Methods in Management Research Workshop, University of Notre Dame (AIS SIG TECH), June 2026.

- **“AI and the Market Value of Skills”**— Accepted @ DePaul Doctoral/Junior Faculty Research Symposium, Chicago, IL, March 2026
- **“AI Upskills Human-Centric and Fundamental Computer Science Knowledge”**
 1. Accepted @ Workshop on Information Technologies & Systems (WITS), Nashville, TN, Dec 2025
 2. Accepted @ Conference of Information System & Technology (CIST), Atlanta, GA, Oct 2025
- Presented AI-Website on “Tracking the New Frontiers of Work in Tennessee” at AI Tennessee Workshop, Knoxville, TN, Jan-2025
- Presented “AI Talk: Can Executives keep their promises?” at INFORMS Annual Conference, Seattle, WA, Oct-2024
- Presented research on “AI for Business Innovation” at Business Analytics Forum, University of Tennessee, Aug-2024

GRANTS

AI Tennessee Initiative Seed Funds: Tracking the New Frontiers of Work in Tennessee. Liu, Chuanren. (Lead PI), Liu, Yuanyang (Co-PI). Total Award: \$64,800, 2024-2025. *Collaborator.* Responsibilities include coordinating research efforts and providing overall management of project activities; leading empirical economic modeling; conducting economic analysis; overseeing data collection and management; presenting research findings and writing peer-reviewed publications; and supervising four M.S. students ([project website](#)).

TEACHING EXPERIENCE

Instructor

- STAT 201 Introduction to Statistics, University of Tennessee *Fall 2025*

Guest Lectures

- Guest lecture on “Clustering Techniques” for Data Mining (BZAN 542), University of Tennessee, Knoxville, TN — Sept 2025.
- Guest lecture on “Probability Theory” for Introductory Statistics (Stats 201), University of Tennessee, Knoxville TN-Mar 2025

Teaching Assistant, University of Tennessee

- BZAN 320 Regression Modelling, Prof Terry Higgins *Summer 2026*
- BZAN 557 Text Mining, Prof Wenjun Zhou *Spring 2026*
- STAT 201 Introduction to Statistics, Prof. Adam Spanbauer *Summer 2025*
- BUAD 503 Business Communications MBA, Prof Angel Norman *Summer 2024*
- BZAN 555 Supply Chain Analytics, Prof. Sean Willems *Spring 2024*
- BZAN 542 Data Mining Methods, Prof. ChuanRen Liu *Fall 2023*

SELECTED COURSEWORK

Class Title	Instructor(s)	Year
Machine Learning	FNU Suya	2025
Deep Learning	Michel Ballings	2025
Reinforcement Learning	Michel Ballings	2025
Microeconomic Theory	James Lake	2023
Data Science	Yuanyang Liu	2023
Design of Experiments	Robert Mee	2022
Time Series Econometrics	Luiz Lima	2022
Econometrics I & II	Celeste Carruthers, Luiz Lima	2022
Applied Optimization	ChuanRen Liu	2022

PROFESSIONAL DEVELOPMENT

Causal Inference I focused on IV, regression discontinuity, matching methods
Causal Inference II focused on diff-in-diff methods
Causal Inference III focused on synthetic control methods
MLx Fundamentals focused on supervised ML, clustering, classification, factorization techniques

TECHNICAL SKILLS

Research Methods: TF-IDF, Word2Vec, LLM2Vec, topic modeling, document clustering. EDA, feature engineering, dimensionality reduction, supervised and unsupervised learning, model tuning and cross-validation.
Programming: Python (pandas, numpy, scikit-learn, pytorch, tensorflow, keras), R, Stata, Sql, PySpark, HPC, Databricks
Data & Visualization: PowerBI, Tableau, JMP, WordPress, QlikView.
Writing L^AT_EX, HTML.
Languages English (fluent), Spanish (fluent), Portuguese (fluent)

WHITE PAPERS

ESG scores & financial performance of Emerging Market Firms, VU, Amsterdam [link](#)
Climate Aligned Investment Portfolios, VU, Amsterdam [link](#)
Latin America State of the Bonds Market Outlook, Climate Bonds, IDB, IFC [link](#)

PROFESSIONAL EXPERIENCE

Agri-Business Analyst Rabobank, NL *July-2022 - July-2023*
Business Analyst Rabobank, NL *July-2021 - June-2022*
Fixed Income Consultant Climate Bonds, NL *Mar-2021 - June-2021*
Financial Analyst Consultant University of Nebraska, Lincoln *Aug-2019 - May-2020*

AWARDS AND SCHOLARSHIPS

Graduate Research Award, AMCIS 2026 *August-2026*
Graduate Research Award, DePaul 2026 *March-2026*
Graduate HCB Award, WITS 2025 *October-2025*
Graduate GSS Award, CIST 2025 *October-2025*
Graduate GSS Award, INFORMS 2024 *October-2024*

ACTIVITIES

Volunteer, Robotics Education for Kids - Centro Hispano

Spring 2023

Assisted in teaching basic robotics concepts to elementary school students, including programming and building simple robots, while fostering enthusiasm for STEM subjects through interactive and engaging activities.