

Esma Ozer

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[linkedin](#) | [website](#) | [MTechO](#)

Economist (PhD '26) specializing in **applied microeconomics and structural modeling** that inform incentives and competition design. Experienced in leading research teams, implementing ML/LLM pipelines, and translating insights to real-world impact, as founder of the EdTech platform MTechO.

EDUCATION

Ph.D. in Economics | *The Pennsylvania State University*

August 2020 - May 2026 (exp.)

References: [Kala Krishna](#), [Michael Gechter](#), [Chloe Tergiman](#)

B.A. in Economics & Political Science | *Bogazici University, Highest Honors*

September 2015 - June 2020

Exchange Program | *Columbia University*

January 2018 - May 2018

TECHNICAL SKILLS

Programming • Python • MATLAB • R • Stata • Azure • Git • LATEX

Methods • Causal inference • structural modeling • machine learning • experimental design • surveys • spatial analysis

Training • Theory-Based Experiments (Caltech) • Dynamic Structural Econometrics • Price Theory Camp (UChicago)

SELECTED RESEARCH PROJECTS

Strategic Learning in Competitive Environments (JMP)

January 2024 – Present

- Designed and executed a **field experiment with 1,400+ high school students** across 10 schools to measure how peer learning and competition shape effort, social behavior, and skill development.
- Led development of an **online learning platform** and multi-source dataset (surveys, SQL-extracted logs, chat transcripts); applied open-source LLM pipelines to analyze 5,000+ interactions for behavioral insights.
- Developed and estimated a **structural model of peer learning, analyzing counterfactual policies**, finding that moderate competition boosts both solo and group learning, while intense competition crowds out collaboration.

Time-Constraints and Decision-Making

October 2022 – April 2025

- Designed and ran a **lab-in-the-field experiment** (N=91) to study how time pressure affects performance.
- Developed and estimated a **structural decision-making model**; simulations suggest revised timing rules narrow gender score gaps by 12 % (**NBER WP**, under review)

Post-Disaster Educational Recovery

July 2023 – Present

- Led a **3,500-respondent survey across 25 schools** in Turkish provinces post-earthquake, capturing learning loss, resilience, and mental health; managed 5+ field staff and local partners, ensuring high-quality data collection.
- Implemented **LLM-assisted labeling** of 7,000 open-ended responses, cutting manual coding time by 70% and quantifying psychological resilience traits to inform post-disaster education policy.

EXPERIENCE

MTechO INITIATIVE | Founder & Project Lead

August 2024 – Present

- Founded **MTechO**, an ed-tech startup targeting spatial inequality in education; secured a **\$9.6K J-PAL grant**.
- Directed end-to-end product development, adaptive peer learning platform with real-time analytics, guiding a cross-functional team of researchers and engineers from concept to launch.
- Partnered with schools and NGOs to pilot the platform, reaching hundreds of underserved students.

PENN STATE UNIVERSITY | Research Assistant | University Park, PA

September 2020 – Present

Urban Redevelopment Spillovers Project (led by [Nick Tsivanidis](#) & [Michael Gechter](#))

- Analyzed **geospatial datasets** for Mumbai using **R**, **ArcPy**, and **Google Geocoding API**; to estimate neighborhood travel times and commuting patterns.
- Contributed to coding and estimation of a **spatial general equilibrium model**, with location-based frictions, processed Indian administrative data to calibrate redevelopment effects on housing and welfare.
- Optimized high-performance computing (HPC) workflows and reproducible pipelines, mentored a junior RA, developed HPC **guides**, acknowledged as a research contributor (R&R at *Econometrica*).

Firm Location & Air Pollution Project (led by [Michael Gechter](#) & [Namrata Kala](#))

- Predicted firm exit with ML models (DTW-KNN, LSTM) in R/Python on time-series rental data from 15,000+ firms.
- Implemented a non-convex assignment algorithm (MATLAB + Knitro) to optimize firm locations across 70+ spatial grids for pollution and firm exit mitigation counterfactuals.

PARIS SCHOOL OF ECONOMICS | Research Assistant | Remote

June 2019 - August 2020

Leadership and Nation-Building Project (led by [Lydia Assouad](#))

- Digitized 5,000+ pages of archival materials (1910–1940) to build a spatial panel of political-leader movements and local activities, securing access to archival collections through partnership with national institutions.
- Oversaw a team of five RAs in digitization and Ottoman-to-modern-Turkish translation, ensuring data accuracy.
- Synthesized archival evidence to support causal analyses, acknowledged as a contributor (R&R at *QJE*).

SELECTED AWARDS

J-PAL Learning For All Grant (\$9.6K) • Mercatus Bastiat Fellowship (\$5K) • PSU Liberal Arts (\$15.5K total)

WORK AUTHORIZATION: U.S. Permanent Residency (Green Card) petition approved; final processing pending.

HOBBIES: Road cycling, Cooking international cuisines, Playing traditional instruments.