

Guillermo Lezama

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SUMMARY

Ph.D. candidate in Economics at the University of Pittsburgh, specializing in Political Economy. Actively seeking data science and analytical roles to apply and enhance expertise in data-driven research. Proficient in Python and Stata, with strong skills in NLP, machine learning, causal inference and applied microeconomics. Experienced in teamwork, co-authorship, and advisory roles, with a proven ability to communicate complex data insights to diverse audiences.

SKILLS AND TRAINING

Languages & Platforms: Python, Stata, R, Julia, ArcGIS, Tableau, SQL, Pyspark.

Python Libraries: OpenAI, Scikit-learn, Pandas, Matplotlib, Seaborn.

Machine Learning: Naïve Bayes, Linear Regressions, Logistic Regressions, K-means, Random Forests.

Quantitative: Panel Data, Non-parametric econometrics, Causal Inference, A/B testing, Diff-in-diff, RDD, IV.

Courses: [Summer Institute in Computational Social Science](#); [The Erdos Institute's](#) Data Science Boot Camp & Data Visualization Mini Course.

EXPERIENCE

Amazon: Seattle, WA

May - August 2024

Economist Intern, Prime Economics

- Fixed Effects Model & Data Analysis: Developed a PySpark-based model to estimate customer speed sensitivity and analyzed large datasets to uncover insights for key business decisions.
- Strategic Impact: Assessed the value of delivery speed changes, guiding strategic investment planning based on customer preferences.

University of Pittsburgh: Pittsburgh, PA

August 2021 – Now

Instructor of Intro to International Economics and Research Assistant

- Created an asynchronous introductory course, producing 80 videos and designing accompanying quizzes/tests.
- Leveraging OpenAI APIs and K-means to classify 15,000+ survey responses into economic strategies.

Búsqueda (newspaper): Montevideo, Uruguay

November 2024

Freelance Data Analyst ([Dashboard 1](#) | [Dashboard 2](#) | [Github Repository](#) | [Slides](#))

- Designed and implemented web applications for the 2024 elections to increase website traffic
- Created interactive tools for visualizing electoral data, making election results comprehensible to the public.

Universidad de la República: Montevideo, Uruguay

August – September 2024

Instructor of Exploratory Data Analysis ([Github Repository](#))

- Course Design: Taught graduate-level EDA, including dimensionality reduction, clustering, and bias identification.
- Big Data & SQL: Used PySpark for large-scale data analysis and taught SQL for relational databases.

Legislator's Office: Montevideo, Uruguay

Feb 2015 – Feb 2017

Economics Advisor to a Member of the Parliament

- Information Synthesis: Crafted presentations and briefs simplifying economic concepts for non-specialist politicians, utilizing macroeconomic and budget data for effective communication.

SELECTED PROJECTS

Information about Corruption and Politicians' Proposals ([Job Market Paper](#) | [Github Repository](#) | [Slides for NLP part](#))

- Processed 13K+ political proposals, cleaning and structuring unstructured text for analysis.
- Applied ML to classify proposals into six policy areas; analyzed partisanship using WordScores & Naive Bayes.
- Presented findings at the World Bank-IFS-ODI Tax Conference & LACEA-LAMES Conference.

Analysis of Politicians' Social Media (co-authored) ([Dissertation Chapter Draft](#) (submitted) | [Published Paper](#))

- Used OpenAI's API and ML to classify 14M tweets, outperforming human annotators in quality/cost.

Extreme Weather Events and Household Environmentally Friendly Consumption (Spring 2022) (co-authored)

- Efficiently merged and cleaned over 15M Nielsen Consumer Panel data points to analyze eco-friendly consumption metrics and assess extreme weather impacts on consumption.

Testing Qualitative Effects with Experimenter Demand (Spring 2020) (co-authored) ([Working Paper](#))

- Experiment Design: Aided in designing lab and online experiments to measure experimenter demand effects.
- Computed Power Calculation using simulations in Python.

EDUCATION

University of Pittsburgh, PhD Economics. (Majors: Micro Theory, Applied Micro. Minor: Experimental Economics) Spring 2025 (*expected*)

University of Pittsburgh, MA Economics.

2020

Universidad de la República (Uruguay), MSc International Economics.

2019

Universidad de la República (Uruguay), BA Economics

2013