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 Sciences**,** and The Erdos Institute's Data Science Boot Camp.

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)
- 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)
- Data Management: Processed 13K+ politicians' proposals, extracting and cleaning unstructured text for analysis.
- Machine Learning Classification: Categorized policy proposals into six areas using Machine Learning, and analyzed political manifestos' partisanship using WordScores and Naive Bayes Classification.

Analysis of Politicians' Social Media (co-authored) (Dissertation Chapter Draft | Published Paper)
- Used OpenAI's API to classify 14M tweets, finding human annotators superior in quality/cost.

Uruguayan Elections Data Exploration (2024) (Github Repository | Slides)
- Designed a web application for accessing precinct-specific election results, attracting 1,000+ visits in the first week and being featured by a major Uruguayan newspaper to boost election coverage and engagement.

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)*
Universidad de la República (Uruguay), *MSc International Economics.* 2019
BA Economics 2013