Guillermo Lezama

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SUMMARY

Ph.D. candidate in Economics with expertise in data science, econometrics, and machine learning. Proficient in Python, Stata, and PySpark, with experience applying causal inference, NLP, and predictive modeling to large-scale datasets. Strong team player with proven success in economic consulting, interdisciplinary research, and co-authorship. Delivered insights from billions of observations during a data-intensive Amazon internship. Experienced in developing interactive data tools, designing ML workflows, and teaching data analysis. Skilled in conveying complex data through reports, visualizations, and presentations for diverse stakeholders. Seeking data science, economic consulting, or analytical roles to apply these skills.

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
- Built and optimized a PySpark model to estimate customer speed sensitivity, leveraging econometrics and billions of observations to analyze causal relationships between delivery speed and purchasing behavior.
- Guided business investments with data-driven insights on delivery speed changes and 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 narratives.

Búsqueda (newspaper): Montevideo, Uruguay — November 2024
Data Analyst (Dashboard 1 | Dashboard 2 | Github Repository | Slides)
- Designed and deployed Heroku-hosted web applications for the Uruguayan elections, boosting website traffic.
- Developed interactive tools to visualize electoral data, enhancing public understanding of election results.

Universidad de la República: Montevideo, Uruguay — August – September 2024
Instructor of Exploratory Data Analysis (Github Repository)
- Taught a graduate-level EDA course covering dimensionality reduction, clustering, bias identification, time series, PySpark for large-scale processing, and SQL for relational databases, enhancing students' big data skills.

Legislator's Office: Montevideo, Uruguay — February 2015 – February 2017
Economic Consultant to a Member of the Congress
- Synthesized information by crafting presentations and briefs that simplified economic concepts for non-specialist politicians, utilizing macroeconomic and budget data to enhance understanding and decision-making.

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 (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 (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