

# Guillermo Lezama

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## SUMMARY

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Economics PhD candidate at the University of Pittsburgh, specializing in Political Economy. Actively pursuing data science and analysis roles in economics or social sciences to apply and expand expertise in data-driven research. Skilled in text-learning, machine learning, and applied microeconomics. Proficient in Python and Stata, adept at communicating complex data insights to a broad range of audiences. Experienced in teamwork, co-authorship, and advisory roles.

## SKILLS

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- **Languages & Platforms:** Python, Stata, R, Julia, ArcGIS, Tableau, SQL (basic queries), Pyspark.
- **Python Libraries:** OpenAI, Scikit-learn, Pandas, Matplotlib.
- **Machine Learning:** Naïve Bayes, Regressions, Random Forests (applied to text).
- **Quantitative:** Panel Data, Non-parametric econometrics, Causal Inference, Diff-in-diff, RDD, SGD, IV.

## EXPERIENCE

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**Amazon:** Seattle, WA Summer 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.

**Universidad de la República:** Montevideo, Uruguay Summer 2024

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

- 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.
- Practical Application: Developed hands-on projects using real-world datasets to reinforce EDA techniques.

**University of Pittsburgh:** Pittsburgh, PA Summer 2022 and Summer 2023

*Instructor of Intro to International Economics*

- Created an asynchronous introductory course, producing 80 videos and designing accompanying quizzes/tests.

**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

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**Information about Corruption and Politicians' Proposals** ([Paper](#))

- 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. ([Github Repository](#))

**Analysis of Politicians' Social Media** (co-authored) ([Paper 1](#)) ([Published Paper 2](#))

- Data Acquisition and Analysis: Extracted 14M tweets via Twitter's API
- Employed OpenAI's API for text classification and found human annotators outperform ChatGPT in quality/cost.

**Testing Qualitative Effects with Experimenter Demand** (co-authored) ([Paper](#))

- Experiment Design: Aided in designing lab and online experiments to measure experimenter demand effects.
- Computed Power Calculation using simulations in Python and defined a theoretical framework for presenting research insights.

**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.

**Uruguayan Elections Data Exploration** ([Github Repository](#))

- Developed a user-friendly web application that enabled users to retrieve precinct-specific election results from the most recent elections by entering their ID, improving accessibility and engagement with electoral data.
- The application received over 1,000 visits in the first week of launch, demonstrating high interest among users.

## EDUCATION

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

**Summer Institute in Computational Social Sciences**

July 2023

**The Erdos Institute, Data Science Boot Camp**

May 2023

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

2019

*BA Economics*

2013