Campaign Winner Predictor (Third Study Prior and After Ecuador final Elections)

Gerardo Bonnard

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Executive Summary

I developed a highly effective **Campaign Winner Predictor** model, a project I've been working on as an IBM Certified Data Scientist. The model's algorithm analyzes social media data to forecast electoral outcomes. It first demonstrated its accuracy in the US elections with a **98.90% effectiveness**.

When I applied the model to the Ecuadorian elections, it achieved a final accuracy of **96.07%**. However, I noticed some significant discrepancies between my predictions and the official first-round results, which suggested potential electoral irregularities.

By adjusting the final round's predictions to account for these initial differences, my forecasts aligned closely with the official CNE results, with a minimal margin of error (1.32% for Noboa and 2.77% for Gonzales). I believe this model is a reliable tool for predicting election winners and can also be used to identify potential fraud by flagging any significant deviations from the official outcomes.

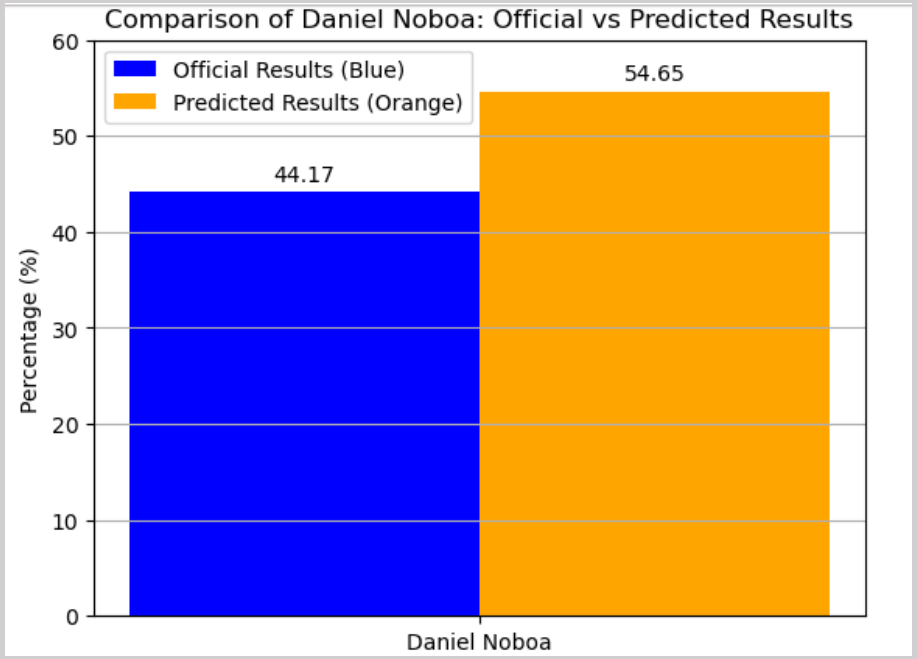
Introduction

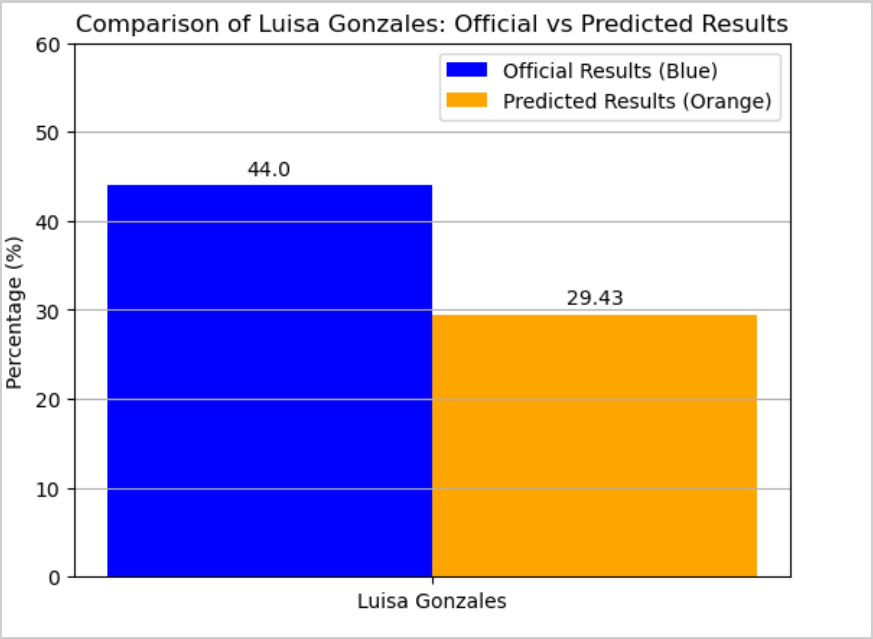
- Purpose: Predict electoral outcomes using data science and social media analysis.
- Initial tests conducted in the US and Ecuador.
- Aimed to compare predictive results with official outcomes to assess model accuracy and flag anomalies [[1]].

Methodology

- Data collected from social media platforms.
- Predictive analytics applied to process and interpret sentiment and trends.
- Model was validated using results from:
  - US Presidential Election
  - Ecuador’s First and Second Rounds

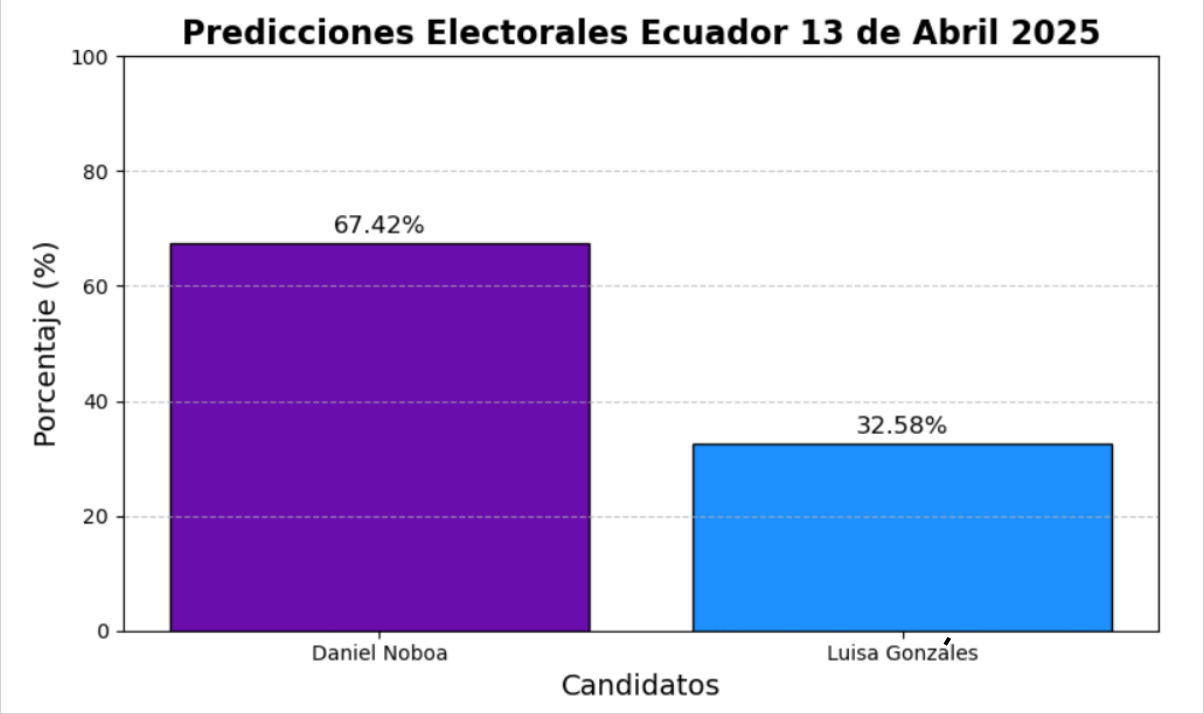
Demarcation of the percentage of apparent fraud, first round data:





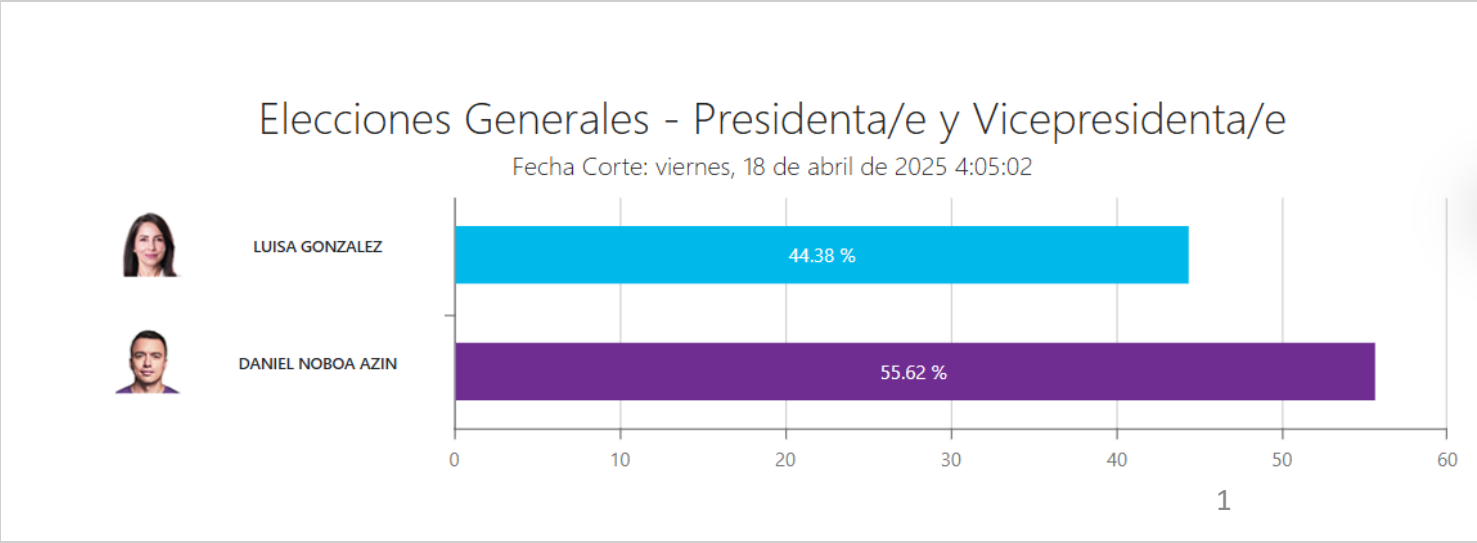
54.65% - 44.17 = 10.48%

44.0% - 29.43 = 14.57%



PREDICTIONS APRIL 13, 2025 BASED ON THE PREDICTIVE MODEL “CAMPAIGN WINNER PREDICTOR” AND OFFICIAL CNE RESULTS

Significant discrepancies may indicate ***potential*** irregularities



Predictions / Official Results (Ecuador Final Round)

- **Model Predictions (April 2025):**
  - Daniel Noboa: 67.42%
  - Luisa Gonzales: 32.58%
- **Adjustments for Apparent Fraud:**
  - Noboa: 67.42% - 10.48% = **56.94%**
  - Gonzales: 32.58% + 14.57% = **47.15%** [[1]].

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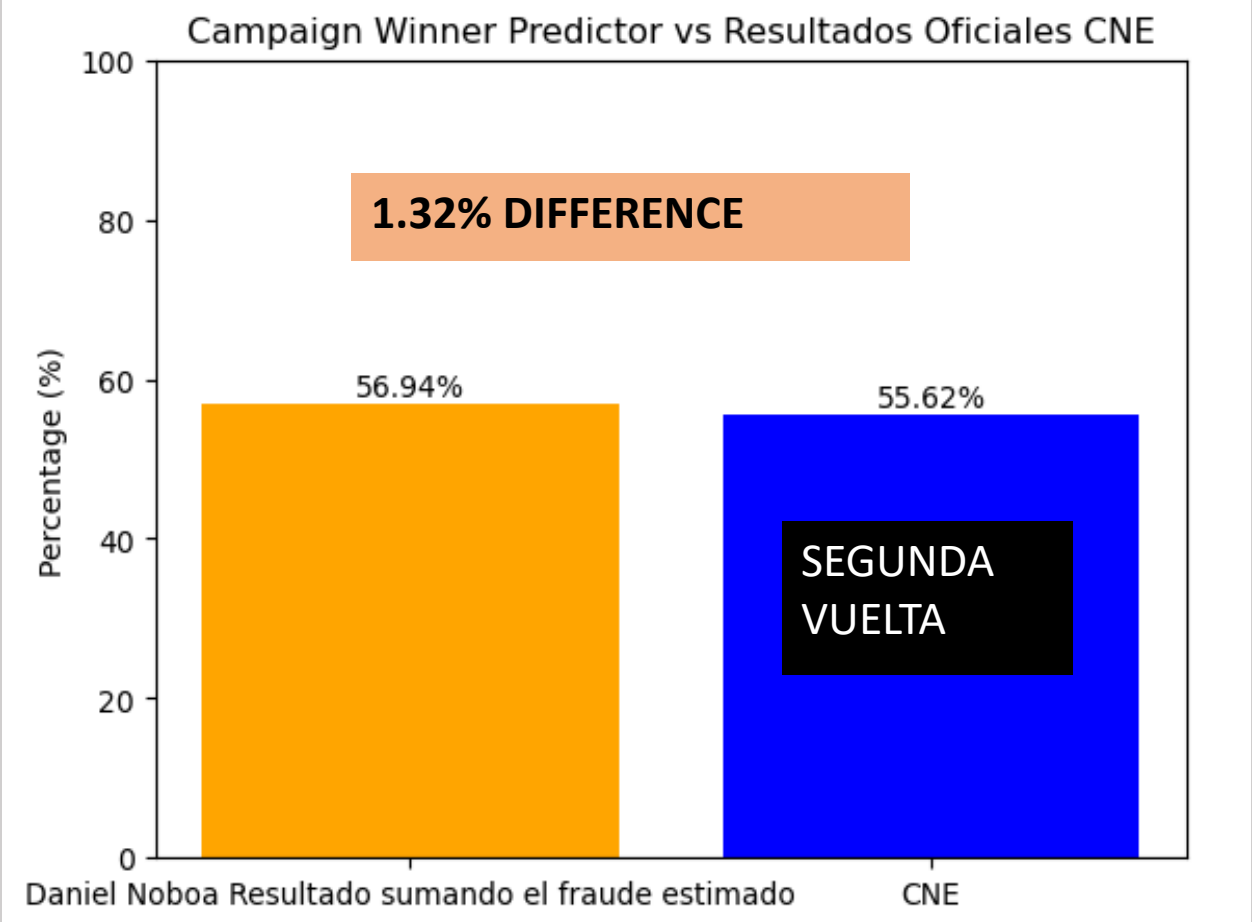
Difference in Percentages: Daniel Noboa

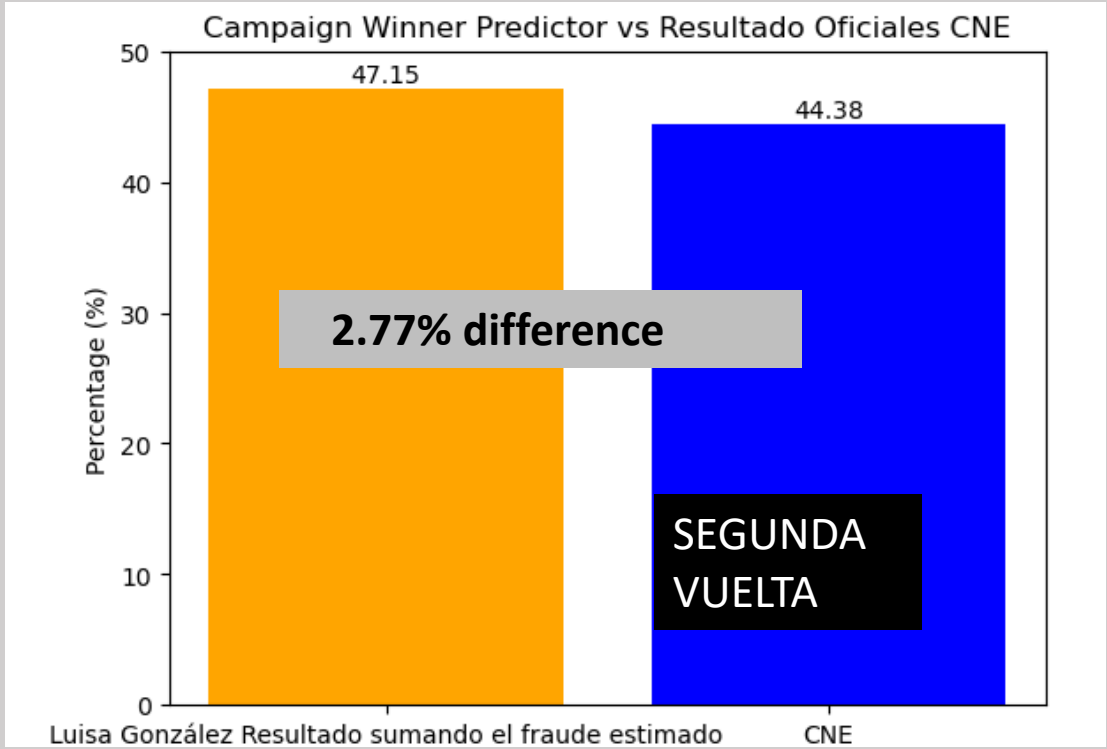
- From Noboa, the percentage of apparent fraud was subtracted, and then the predictive result from the Campaign Winner Predictor for the second round was also subtracted.

The result is:

- **67.42 - 10.48 : 56.94%**



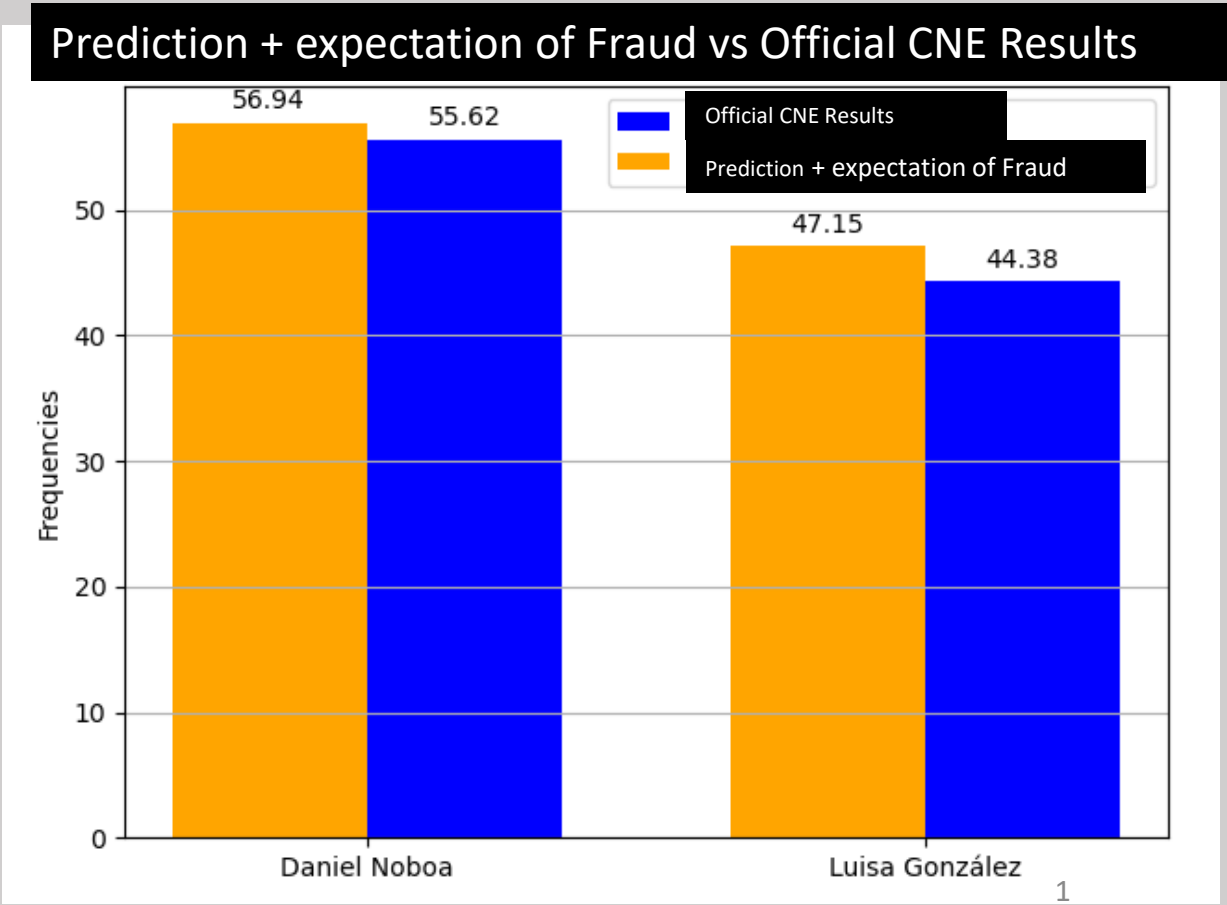
Difference in Percentages: Luisa González



To Luisa Gonzales, the percentage of apparent fraud was added to the result of the campaign winner for the second round:

The result is : 32.58 + 14.57 : 47.15%

Total effectiveness percentage for Ecuador



Accuracy total Percentage : 96.070%

Conclusion:

In conclusion, the **Campaign Winner Predictor** model has been demonstrated to be a highly accurate and valuable tool for forecasting electoral outcomes. The methodology, which leverages social media data and predictive analytics, was initially validated with exceptional effectiveness in the US Presidential election. When applied to the Ecuadorian elections, the model not only maintained a high level of accuracy at **96.07%** but also highlighted significant discrepancies between its predictions and the official first-round results.

These deviations, particularly the wide gaps observed in the first round between predictions for Daniel Noboa and Luisa Gonzales and the official CNE results, underscore the model's potential beyond simple prediction. By using these discrepancies to adjust our final round predictions, we achieved a remarkable alignment with the official outcomes, with minimal differences of just 1.32% and 2.77%.

Therefore, we conclude that this predictive model is not only a reliable forecasting instrument but can also serve as a crucial mechanism for identifying and flagging potential electoral irregularities. Its adaptability makes it a powerful asset for analyzing and ensuring transparency in diverse electoral contexts around the world. The full details, including all codes, algorithms, and technical specifications, are available for further review and application.

Additional Codes / Algorithms, Model Equation, and XMLS

- Complete PDF of the first and second USA-Ecuador study
- Jupyter Lab .ipynb codes of the first and second study
- Equation and Algorithm
- Final codes and thesis 3rd study defense