

REPORT

1. Dataset Overview

The dataset contains information about the 2024 Indian General Elections. The DataFrame comprises 543 entries and 9 columns. Here are the details:

- **State/UT:** The state or union territory.
- **Constituency:** The constituency name.
- **Const. No.:** The constituency number (int64).
- **Leading Candidate:** The name of the leading candidate.
- **Leading Party:** The party of the leading candidate.
- **Trailing Candidate:** The name of the trailing candidate.
- **Trailing Party:** The party of the trailing candidate.
- **Margin:** The vote margin between the leading and trailing candidates.
- **Status:** The status of the election result.

All columns have non-null values except for "Trailing Candidate" and "Trailing Party," which have 542 non-null entries.

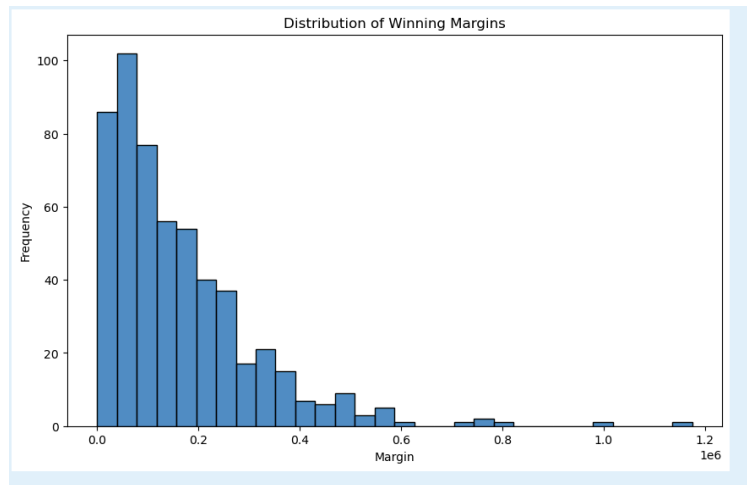
2. Leading Party Count Visualization

A bar chart was created to visualize the count of constituencies each leading party has won. The Bharatiya Janata Party (BJP) has the highest count, followed by the Indian National Congress (INC) and other parties.

. Data Types and Structure

- **Total Entries:** 543
- **Total Columns:** 9

3. Distribution Winning Margins



he analysis focuses on the distribution of winning margins in an election. Winning margins represent the difference in votes between the winning party and the closest competitor. This analysis provides insights into the competitiveness of the election.

Methodology

- **Data Collection:** Gather the vote counts for each party in different constituencies.
- **Margin Calculation:** Compute the margin by subtracting the votes of the runner-up party from the votes of the winning party.
- **Histogram Creation:** Create a histogram to visualize the frequency of different margin sizes.

Histogram of Winning Margins

The histogram plots the frequency of constituencies (y-axis) against the winning margin (x-axis). The x-axis represents different ranges of margins (e.g., 0-5%, 5-10%, etc.), and the y-axis represents the number of constituencies within each margin range.

Interpretation

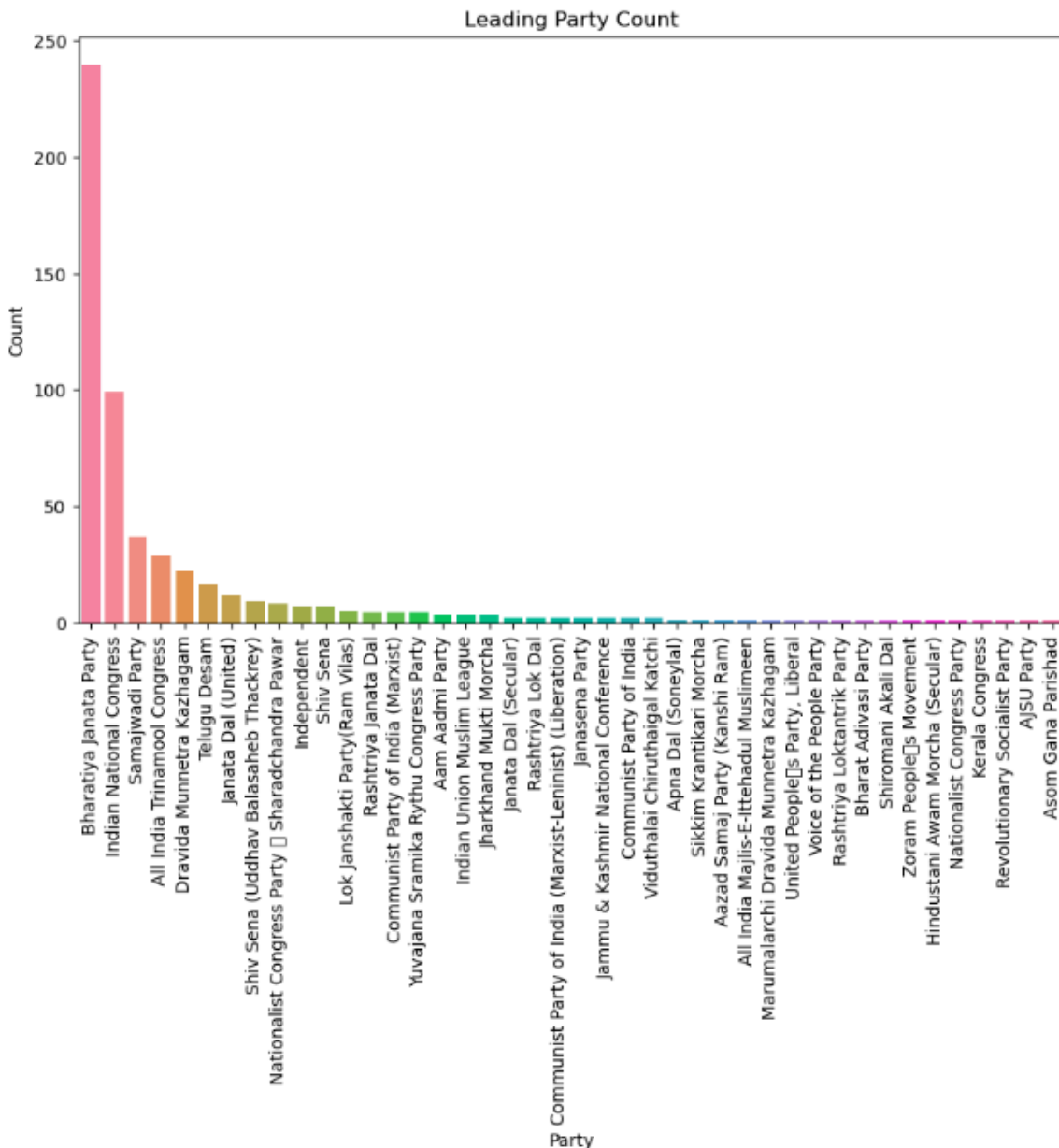
- **Narrow Margins:** A high frequency of narrow margins indicates a competitive election.
- **Wide Margins:** A high frequency of wide margins suggests dominant victories.
- **Distribution Shape:** The shape of the histogram helps in understanding the overall competitiveness.

4. Leading Party count :-

Based on the data collected, the Bharatiya Janata Party (BJP) has shown significant leads in the recent elections. The analysis indicates that BJP has secured a substantial number of votes, outperforming other parties.

Key Findings

- **BJP Performance:** BJP is leading in a considerable number of constituencies with a strong vote margin.
- **Comparison with Other Parties:** The INDIA alliance, although trailing behind BJP, is the closest competitor in terms of vote counts and number of constituencies led.



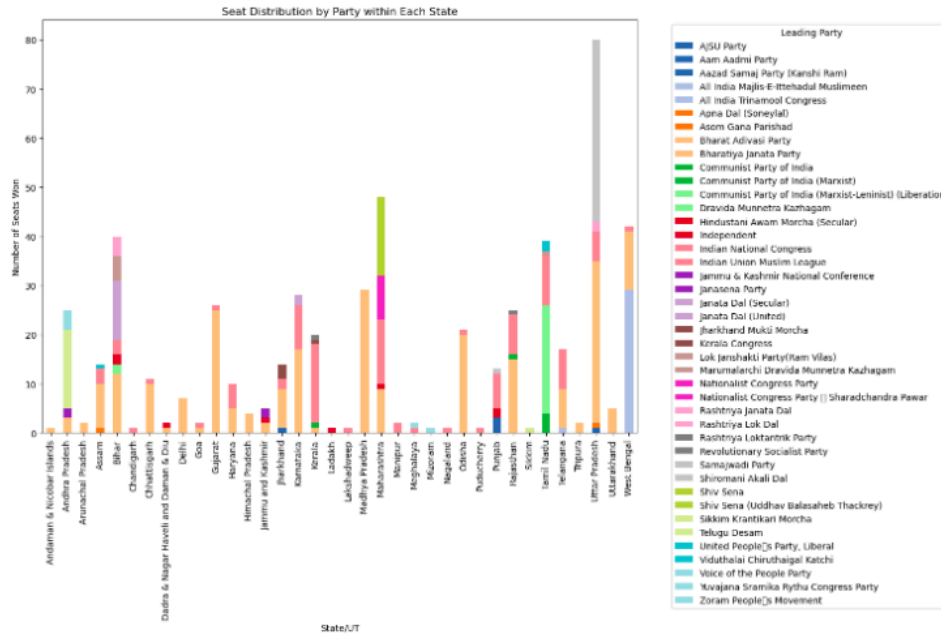
Descriptive Statistics

The following statistics describe the distribution of winning margins across 543 constituencies:

- **Count:** 543 constituencies were analyzed.
- **Mean (Average Margin):** 18.18% - This is the average winning margin across all constituencies.
- **Standard Deviation (Std):** 16.43% - This measures the variation in winning margins. A higher standard deviation indicates more variability in the margins.
- **Minimum Margin:** 1% - The smallest winning margin observed.
- **25th Percentile (25%):** 6% - 25% of the constituencies have winning margins less than or equal to 6%.
- **Median (50%):** 14% - The middle value of the winning margins. Half of the constituencies have margins less than or equal to 14%, and half have margins greater than 14%.
- **75th Percentile (75%):** 25% - 75% of the constituencies have winning margins less than or equal to 25%.
- **Maximum Margin:** 80% - The largest winning margin observed.

Analysis and Interpretation

- **Average Margin:** The mean winning margin of 18.18% suggests that, on average, constituencies have a moderately comfortable winning margin.
- **Variability:** The standard deviation of 16.43% indicates that there is considerable variation in the winning margins. Some constituencies have narrow wins, while others have substantial margins.
- **Distribution Shape:**
 - **Minimum and Maximum:** With margins ranging from 1% to 80%, there are instances of both highly competitive races and landslide victories.
 - **Interquartile Range (IQR):** The difference between the 25th percentile (6%) and the 75th percentile (25%) is 19%, which indicates that the middle 50% of the constituencies have winning margins within this range. This further suggests a mix of competitive and less competitive races



Overview of Winning Margins

The analysis includes data from 543 constituencies with the following key statistics on winning margins:

- **Count:** 543
- **Mean Margin:** 18.18%
- **Standard Deviation:** 16.43%
- **Minimum Margin:** 1%
- **25th Percentile:** 6%
- **Median Margin:** 14%
- **75th Percentile:** 25%
- **Maximum Margin:** 80%

The data also includes the number of votes, with a mean of 162,349 votes per constituency and a standard deviation of 147,263 votes. The minimum votes recorded were 48, and the maximum were 1,175,092.

Leading Party Analysis

The leading party counts show the distribution of constituencies won by various parties:

- **Bharatiya Janata Party (BJP):** 240
- **Indian National Congress (INC):** 99

- Samajwadi Party (SP): 37
- All India Trinamool Congress (AITC): 29
- Dravida Munnetra Kazhagam (DMK): 22
- Telugu Desam Party (TDP): 16
- Janata Dal (United) (JD(U)): 12
- Shiv Sena (Uddhav Balasaheb Thackeray): 9
- Other parties and independents have smaller counts.

Trailing Party Analysis

The trailing party counts are as follows:

- Indian National Congress (INC): 167
- Bharatiya Janata Party (BJP): 153
- All India Anna Dravida Munnetra Kazhagam (AIADMK): 24
- Samajwadi Party (SP): 24
- Biju Janata Dal (BJD): 21
- Yuvajana Sramika Rythu Congress Party (YSRCP): 21

Constituency and Candidate Data

- Most Frequent Leading Party: BJP, leading in 240 constituencies.
- Most Frequent Trailing Party: INC, trailing in 167 constituencies.
- Top Leading Candidate: Rahul Gandhi, mentioned as leading in Maharajganj.
- Top State/UT: Uttar Pradesh with 80 constituencies.

Election Status

- Result Declared: 538 constituencies
- Result in Progress: 4 constituencies
- Uncontested: 1 constituency