Political Juggernauts: A Quantitative analysis of candidates in 2019 Lok Sabha Elections

Abstract

The 2019 Lok Sabha elections in India witnessed a significant political landscape transformation, with new players emerging alongside established political stalwarts. This study employs quantitative methods to analyse the characteristics, campaign strategies, and electoral outcomes of candidates across different political parties.

Utilizing data from electoral commissions, opinion polls, and socio-economic indicators, we delve into the demographics, educational backgrounds, and professional experiences of candidates. The study also assesses the influence of social media and traditional media coverage on candidate visibility and public perception.

Preliminary findings suggest a diversification of candidates in terms of age, gender, and educational qualifications. Furthermore, the study uncovers correlations between campaign expenditure, media coverage, and electoral success. Interestingly, candidates with a stronger social media presence did not necessarily translate into electoral victories, indicating the multifaceted nature of voter decision-making.

This analysis aims to contribute to the understanding of the evolving dynamics of Indian politics, offering insights into the factors influencing voter behaviour and candidate success in the 2019 Lok Sabha elections.

Introduction:

The Lok Sabha Election 2019 was a significant event in Indian politics. It took place in seven phases from April 11, 2019, to May 19, 2019. The election determined the composition of the 17th Lok Sabha, the lower house of the Indian Parliament. The Bhartiya Janata Party (BJP) emerged as the single largest party with a majority, and its leader, Narendra Modi, was re-elected as the Prime Minister of India. The election witnessed intense political campaigning, with various parties and alliances vying for seats across the country. It saw a high voter turnout, and the results had a profound impact on the country's political landscape.

All 543 elected MPs are elected from single-member constituencies using first-past-the-post voting. The President of India appoints an additional two members from the Anglo-Indian community if he believes that community is under-represented. Eligible voters must be Indian citizens, 18 or older than 18, an ordinary resident of the polling area of the constituency and registered to vote (name included in the electoral rolls), possess a valid voter identification card issued by the Election Commission of India or an equivalent. Some people convicted of electoral or other offences are barred from voting.

The elections are held on schedule and as per the Constitution of India that mandates parliamentary elections once every five years.

Technical Architecture:

Project Flow:

To accomplish this, we have to complete all the activities listed below,

- Define Problem / Problem Understanding
  - o Specify the business problem
  - o Business requirements
  - o Literature Survey
  - o Social or Business Impact.
- Data Collection & Extraction from Database
  - o Collect the dataset,
  - o Connect datasets- Airports, Airlines, Airplanes and Routes with Tableau
- Data Preparation
  - o Prepare the Data for Visualization
- Data Visualizations
  - o No of Unique Visualizations
- Dashboard
  - o Responsive and Design of Dashboard
- Story
  - o No of Scenes of Story
- Report
  - o No of Visualization with detail information
- Performance Testing
  - o Amount of Data Rendered to tableau
  - o Utilization of Data Filters
  - o No of Calculation Fields
  - o No of Visualizations/ Graphs
- Web Integration
  - o Dashboard and Story Integrating in Webpage and Flask Integration
- Project Demonstration & Documentation
  - o Record explanation Video for project end to end solution
  - o Project Documentation-Step by step project development procedure.

Milestone 1: Define Problem / Problem Understanding

Activity 1: Specify the business problem

Project Description:

The Lok Sabha Election 2019 was a significant event in Indian politics. It took place in seven phases from April 11, 2019, to May 19, 2019. The election determined the composition of the 17th Lok Sabha, the lower house of the Indian Parliament. The Bhartiya Janata Party (BJP) emerged as the single largest party with a majority, and its leader, Narendra Modi, was re-elected as the Prime Minister of India. The election witnessed intense political campaigning, with various parties and alliances vying for seats across the country. It saw a high voter turnout, and the results had a profound impact on the country's political landscape.

All 543 elected MPs are elected from single-member constituencies using first-past-the-post voting. The President of India appoints an additional two members from the Anglo-Indian community if he believes that community is under-represented. Eligible voters must be Indian citizens, 18 or older than 18, an ordinary resident of the polling area of the constituency and registered to vote (name included in the electoral rolls), possess a valid voter identification card issued by the Election Commission of India or an equivalent. Some people convicted of electoral or other offences are barred from voting.

The elections are held on schedule and as per the Constitution of India that mandates parliamentary elections once every five years.

Activity 2: Business requirements

The Lok Sabha Election 2019 presented various stakeholders with different business requirements for utilizing data analytics with Tableau. One crucial aspect was understanding voter demographics to tailor campaigns and messages accordingly. Analysing data on age groups, gender distribution, and regional variations provided insights that helped political parties effectively target specific voter segments. Another important requirement was predicting election outcomes by analysing historical data, polling trends, and other relevant factors. This allowed parties, candidates, and media organizations to understand potential winners and plan their strategies accordingly. Constituency-wise performance assessment was another significant aspect, where the performance of candidates and parties at the local level was analysed. By leveraging Tableau's visualizations, key battleground constituencies could be identified, and campaign efforts could be prioritized accordingly.

Activity 3: Literature Survey

A literature survey for Lok Sabha Election 2019 involves reviewing academic articles, books, and other sources related to aviation industry including political, economic, cultural models. It also discusses various factors that affects the voter voting behaviour etc. The survey can provide a comprehensive understanding of the significance, challenges, and opportunities associated with Political Parties during elections.

Activity 4: Social or Business Impact.

The utilization of data analytics with Tableau in the Lok Sabha Election 2019 had a significant social impact. By understanding voter demographics and tailoring campaigns accordingly, political parties were able to connect with specific segments of the population, addressing their concerns and aspirations more effectively. This personalized approach enhanced voter engagement and participation, ultimately strengthening the democratic process.

The ability to predict election outcomes through data analytics provided transparency and insight into the electoral landscape. It allowed voters to have a better understanding of potential winners and the factors influencing their choices. This increased awareness empowered voters to make informed decisions, fostering a more informed electorate.

The assessment of constituency-wise performance and identification of key battleground areas enabled parties to allocate resources strategically. This resulted in targeted campaigns that directly addressed the needs of specific communities and regions. As a result, political parties became more accountable to the diverse needs of the population, promoting inclusivity and representation.

Evaluating campaign effectiveness and tracking voter sentiment using data analytics allowed for the timely adjustment of strategies and messaging. Political parties could respond to changing dynamics and address emerging issues promptly, reflecting the evolving concerns of the electorate. This responsiveness and adaptability created a more dynamic and engaged political discourse.

Milestone 2: Data Collection & Extraction from Database

Data collection is the process of gathering and measuring information on variables of interest, in an established systematic fashion that enables one to answer stated research questions, test hypotheses, and evaluate outcomes and generate insights from the data.

Activity 1: Collect the dataset

Activity 1.1: Understand the data

Data contains all the meta information regarding the columns described in the CSV files. We have provided csv file.

Column Description for LokSabha2019(Cleaned).xlsx:

State: String
Constituency: String
Name: String
Winer: Integer
Party: String
Symbol: String
Gender: String
Criminal cases: Integer
Age: Integer
Category: String
Education: String
Assets: integer
Liabilities: integer
General Votes: integer
Postal Votes: integer
Total Votes: integer
Over Total Electors in Constituency: integer
Over Total Votes polled in Constituency: integer
Total Electors: integer

Activity 2: Connect datasets State & County with Tableau

Reference Video Link:

https://drive.google.com/file/d/1GQOy7y4K_mE9__kn-H7PwN7YN1RBTVvs/view?usp=sharing

Milestone 3: Data Preparation

Activity 1: Prepare the Data for Visualization

Data modules are containers that describe data and rules for combining and shaping data to prepare it for analysis and visualization in Tableau. Data module sources. Data modules can be based on data servers, packages, uploaded files, data sets, and other data modules.

Video 1:

https://drive.google.com/file/d/17aVU7MNWFh53HbHFe5Ck-2kTQ704XUbk/view?usp=sharing

Milestone 4: Data Visualization

Data visualization is the process of creating graphical representations of data in order to help people understand and explore the information. The goal of data visualization is to make complex data sets more accessible, intuitive, and easier to interpret. By using visual elements such as charts, graphs, and maps, data visualizations can help people quickly identify patterns, trends, and outliers in the data.

Activity 1: No of Unique Visualizations

The number of unique visualizations that can be created with a given dataset. Some common types of visualizations that can be used to analyse the performance and efficiency of project include bar charts, line charts, heat maps, scatter plots, pie charts, Maps etc. These visualizations can be used to compare performance, track changes over time, show distribution, and relationships between variables.

Activity 1.1: Map showing distribution of constituency on India

Video 2:

https://drive.google.com/file/d/1amiIwXWeCwtmZGqq_XhcQxcwqnJxCLYt/view?usp=sharing

Activity 1.2: Total Constituencies in India

For the purpose of constituting the Lok Sabha , the whole country has been divided into 543 Parliamentary Constituencies , each one of which elects one member. The members of the Lok Sabha are elected directly by the eligible voters . The President of India can nominate a maximum of two members as representatives of the Anglo- Indian community . Some seats are

reserved in Lok Sabha for the members of the Schedule Castes and Scheduled Tribes. As per the order issued by the Delimitation Commission in 2008 , 412 are general, 84 seats are reserved for Scheduled Castes and 47 seats for the Scheduled Tribes .Earlier it was 79 and 41 for Scheduled Castes and Scheduled Tribes respectively.

Activity 1.3: bubble Chart showing total votes polled

Video 3:

https://drive.google.com/file/d/1iLUvdRR_RUBc4ooB8OkJV8RDFIR9DW0N/view?usp=sharing

Activity 1.4: Bar chart showing seats won by parties

Video 4:

https://drive.google.com/file/d/1LFrcDlXRwHXQ1EczwymIeZmDvsG71d63/view?usp=sharing

Activity 1.5: Bar chart showing category by winner

Video 5:

https://drive.google.com/file/d/1GUhywXSIU7wp3hJTU7Bh2LiFwGrb0Ika/view?usp=sharing

Activity 1.6: Table showing list of candidates who won

Video 6: https://drive.google.com/file/d/1ABPKws89RRZN-9nBmhrVNGPs-xGDfudr/view?usp=sharing

Activity 1.7: pie chart showing gender wise winner in state

Video 7: https://drive.google.com/file/d/1w0BIZMsapZdvdF7Rcl0ATlk-oIOYLb9E/view?usp=sharing

Activity 1.8: side-by-side chart showing no. of seats on which parties contested election and actual seats won

Video 8: https://drive.google.com/file/d/1tGffgjtkU1pq_8f86WbHXr-xWLAzNRyV/view?usp=sharing

Activity 1.9: Table showing oldest candidates who won in election

Video 9: https://drive.google.com/file/d/1rQRHv49iCptOFKdY1gC_pfARuEQLAzT-/view?usp=sharing

Activity 1.10: Bar chart showing top 10 constituencies with highest electors

Video10: https://drive.google.com/file/d/1SnnBMAG8yq7TG3nDN0Kphao4rcbvxSl4/view?usp=sharing

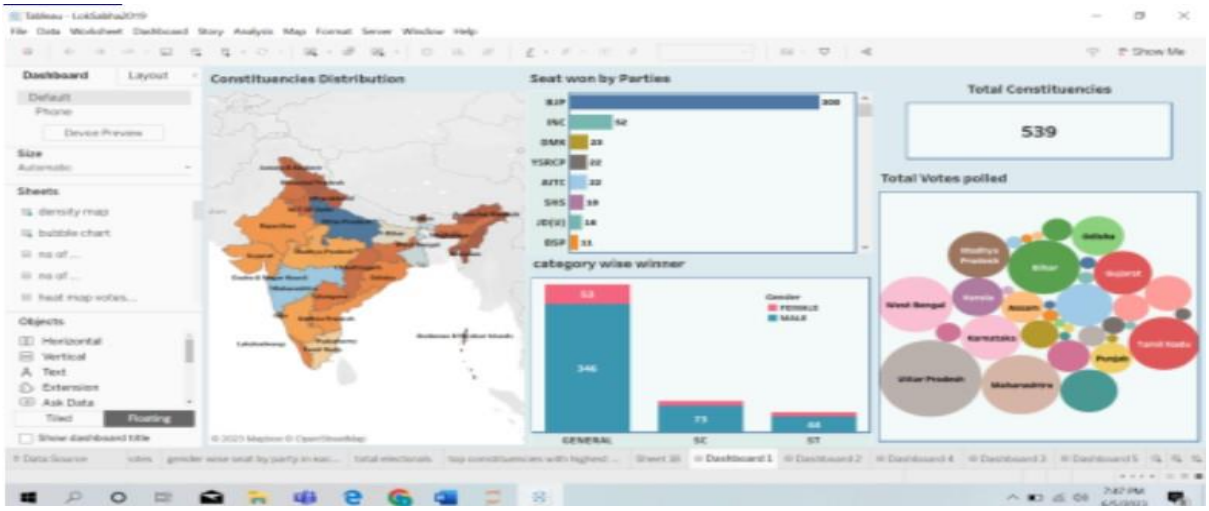
Milestone 5: Dashboard

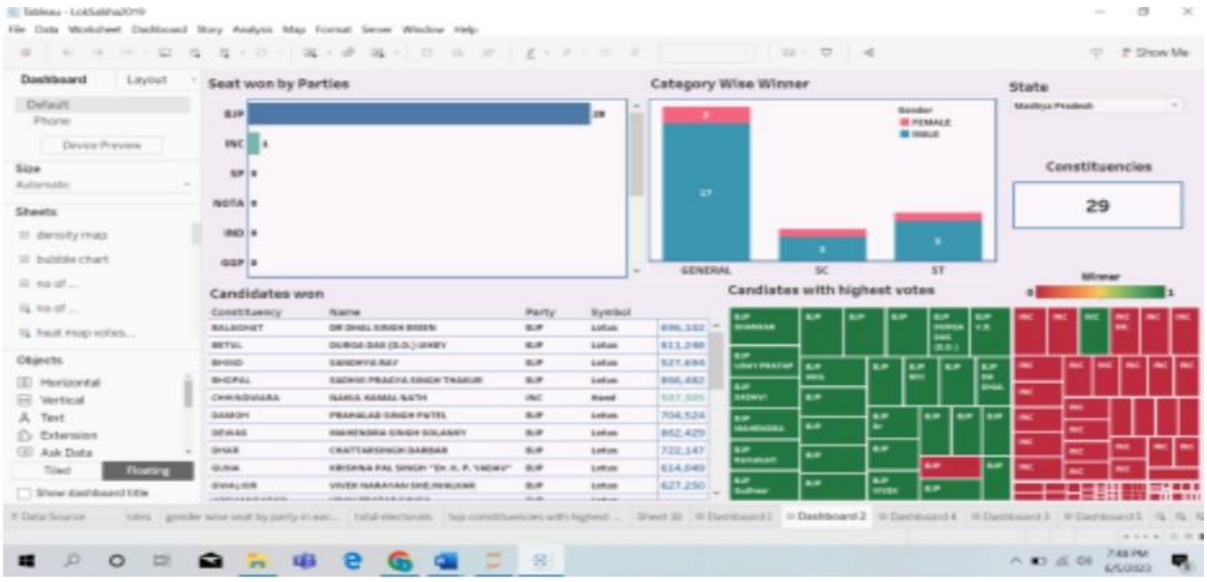
A dashboard is a graphical user interface (GUI) that displays information and data in an organized, easy-to-read format. Dashboards are often used to provide real-time monitoring and analysis of data, and are typically designed for a specific purpose or use case. Dashboards can be used in a variety of settings, such as business, finance, manufacturing, healthcare, and many other industries. They can be used to track key performance indicators (KPIs), monitor performance metrics, and display data in the form of charts, graphs, and tables.

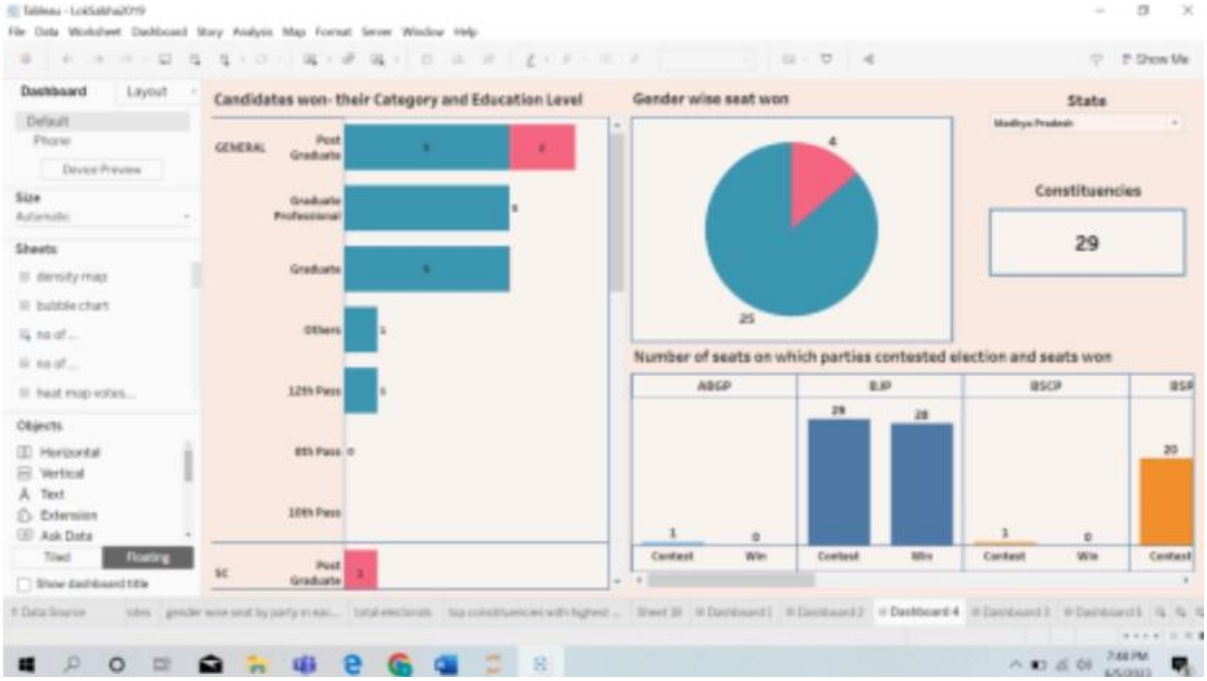
Activity :1- Responsive and Design of Dashboard

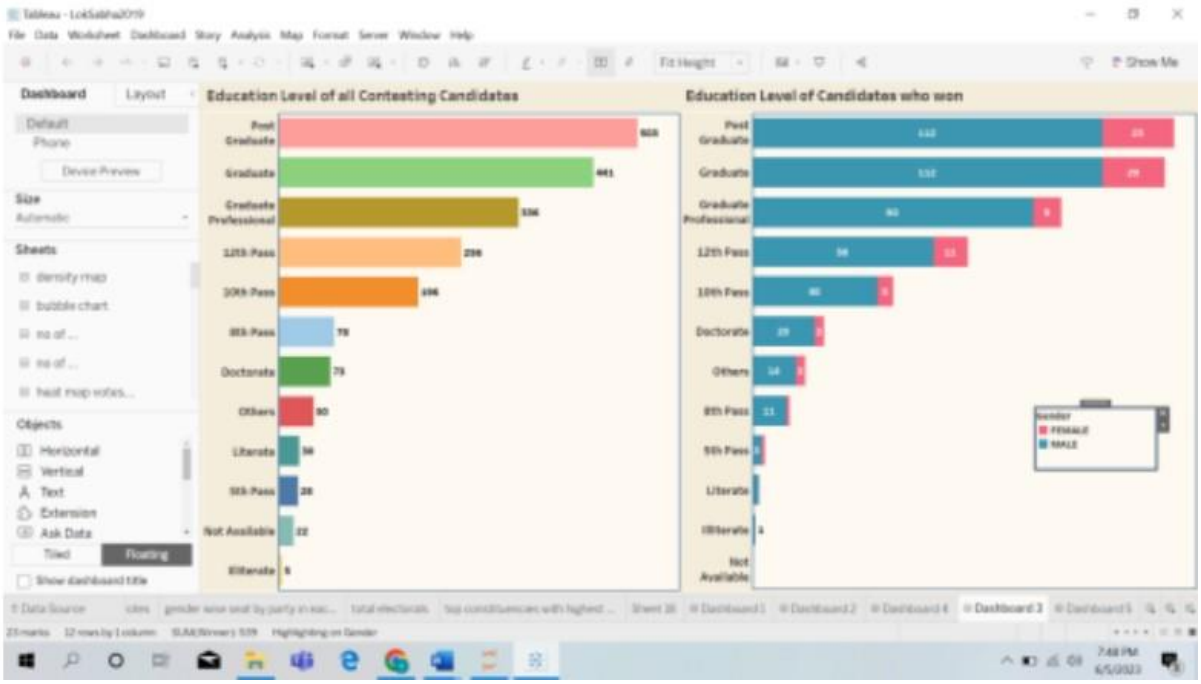
The responsiveness and design of a dashboard for Data-Driven insights on Lok Sabha Election 2019 is crucial to ensure that the information is easily understandable and actionable. Key considerations for designing a responsive and effective dashboard include user-cantered design, clear and concise information, interactivity, data-driven approach, accessibility, customization, and security. The goal is to create a dashboard that is user-friendly, interactive, and data-driven, providing actionable insights.

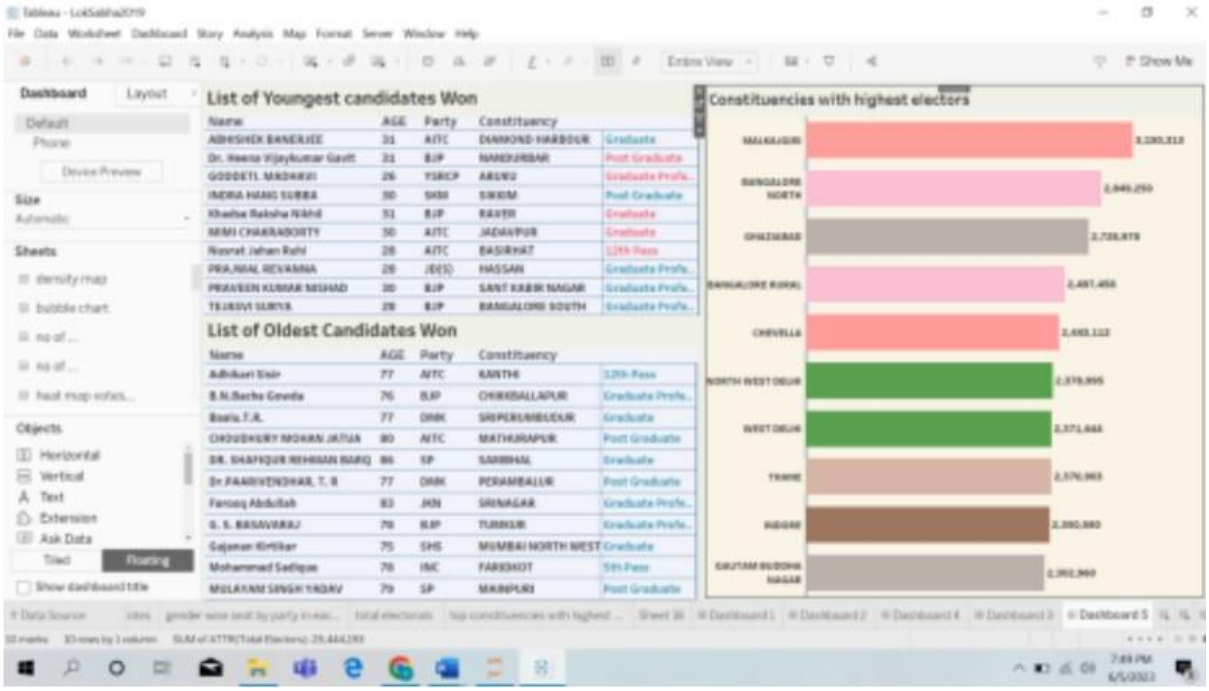
Video 11:
https://drive.google.com/file/d/1MJl5LrEYAhoQ7rvsSRll8Tjer9Ad3Trz/view?usp=sharing


Constituencies Distribution
Seat won by Parties
BJP 303
INC 52
DMK 23
YSRCP 22
AITC 22
SHS 18
JD(U) 16
BSP 11
Total Constituencies
539
Total Votes polled
category wise winner
GENERAL
SC
ST


Seat won by Parties
BJP 28
INC 1
Category Wise Winner
GENERAL
SC
ST
State
Madhya Pradesh
Constituencies
29
Candidates won
Candiates with highest votes
Winner


Candidates won- their Category and Education Level
GENERAL
Post Graduate
Graduate Professional
Graduate
Others
12th Pass
8th Pass
10th Pass
SC
Post Graduate
Gender wise seat won
4
25
State
Madhya Pradesh
Constituencies
29
Number of seats on which parties contested election and seats won
ABGP
BJP
BSCP
BSP
Contest
Win

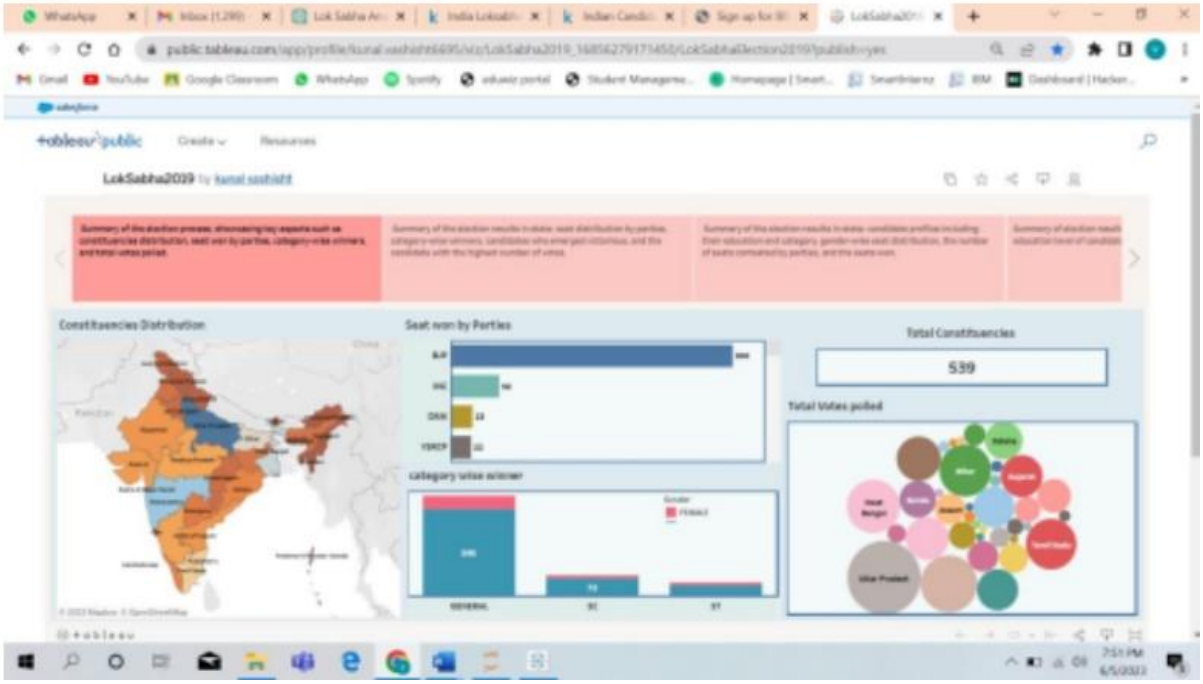




Milestone 6: Story

A data story is a way of presenting data and analysis in a narrative format, with the goal of making the information more engaging and easier to understand. A data story typically includes a clear introduction that sets the stage and explains the context for the data, a body that presents the data and analysis in a logical and systematic way, and a conclusion that summarizes the key findings and highlights their implications. Data stories can be told using a variety of mediums, such as reports, presentations, interactive visualizations, and videos.

Video 12: https://drive.google.com/file/d/1y2AtciNKfE86wbgvt-Nn4rVGxjkTN1XS/view?usp=sharing



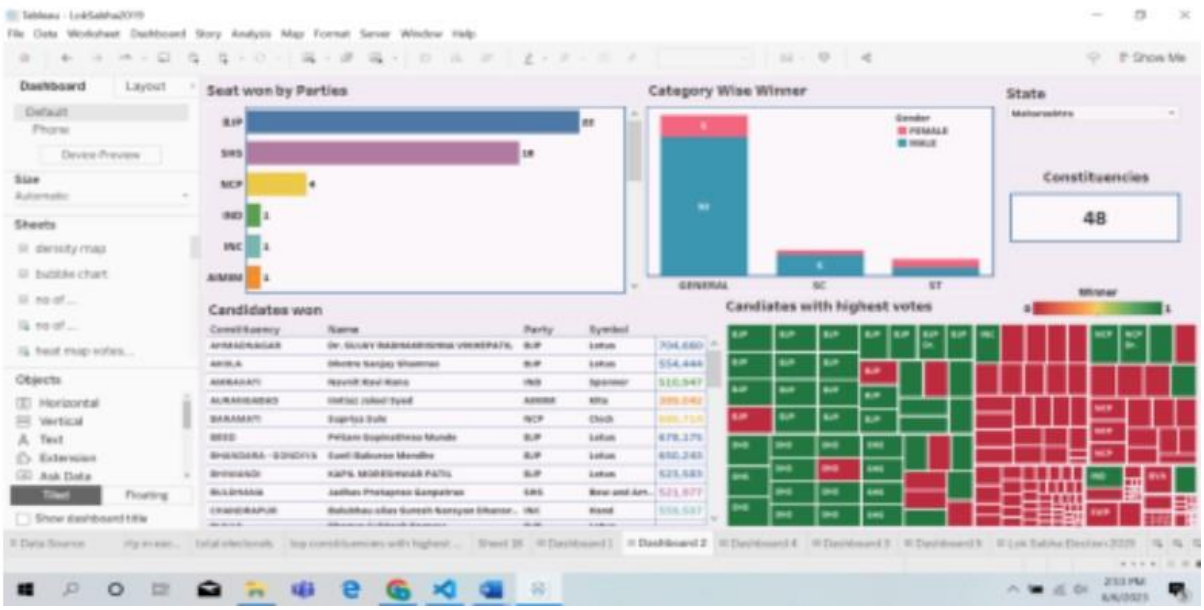
Milestone 7: Report

A report in data analytics typically involves analysing and interpreting data to draw insights and conclusions that can inform business decisions or address research questions. The report usually includes a summary of the data analysis process, including the methods and tools used, as well as the findings and recommendations based on the analysis. The report should begin with an executive summary, which provides a brief overview of the main findings and recommendations. The introduction should provide background information on the problem or research question being addressed and the data sources used.

Activity:1- No of Visualization with detail information

When creating a report in Tableau, it is often helpful to include visualizations to help communicate the findings of the analysis.

Video 13: https://drive.google.com/file/d/1u3IuPaHPtHmhlLp3WHNPF2MSvGYFKzK1/view?usp=sharing

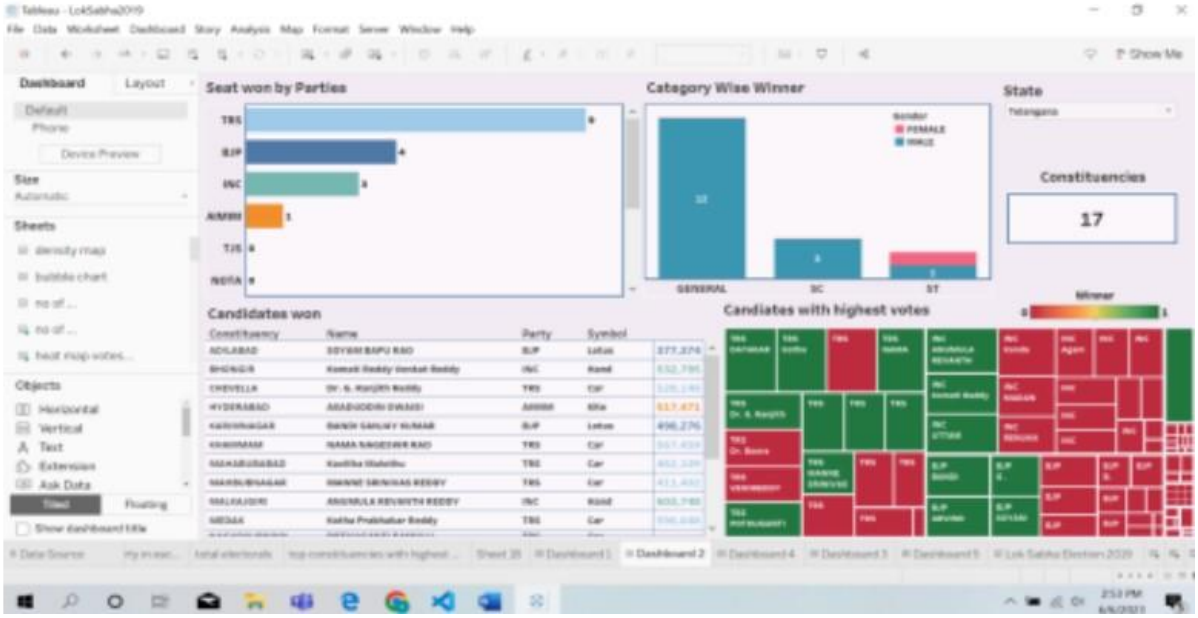


Milestone 8: Performance Testing

Activity 1: Amount of Data Rendered to tableau

The amount of data that is rendered to a database depends on the size of the dataset and the capacity of the database to store and retrieve data.

Activity 2: Utilization of Filters



Activity 4: No of Visualizations/ Graphs

1. Summary of the election process, showcasing key aspects such as constituencies distribution, seat won by parties, category-wise winners, and total votes polled.
2. Summary of the election results in state- seat distribution by parties, category-wise winners, candidates who emerged victorious, and the candidate with the highest number of votes.
3. Summary of the election results in state- candidate profiles including their education and category, gender-wise seat distribution, the number of seats contested by parties, and the seats won.
4. Summary of election results-education level of contesting candidates and education level of candidates who emerged victorious.
5. Summary of election results- Youngest and Oldest candidates won, Constituencies with highest electors.