Political Juggernauts: A Quantitative Analysis of Candidates in the 2019 LokSabha Elections

1.INTRODUCTION

This project, titled "A Quantitative Analysis of Candidates in the 2019 LokSabha Elections with Tableau," aimed to provide a comprehensive and data-driven exploration of the candidates who contested in the general elections of 2019 in India. Utilizing Tableau's advanced analytics and visualization capabilities, the project sought to uncover patterns, trends, and insights that could contribute to a better understanding of the electoral landscape.

The LokSabha is composed of representatives of people chosen by direct election on the basis of Universal Adult Suffrage. The Constitution of India allows for a maximum of 550 members in the House, with 530 members representing the States and 20 representing the Union Territories. The 17th LokSabha was formed by the members elected in the 2019 Indian general election. Elections, all across India, were conducted in seven phases from 11 April 2019 to 19 May 2019 by the Election Commission of India.

The BharatiyaJanata Party received 37.36% of the vote, the highest vote share by a political party since the 1989 general election, and won 303 seats, further increasing its substantial majority. In addition, the BJP-led National Democratic Alliance (NDA) won 353 seats.

1.1 Overview

1.1.1 Objectives:

- **Candidate Demographics:** Analyze the demographic characteristics of candidates, including age, gender, educational background, and professional experience.
- **Party Affiliation:** Explore the distribution of candidates across political parties and independent candidates, assessing party-wise performance.
- **Geographical Patterns:** Investigate regional variations in candidate participation, identifying trends in candidate selection across states.
- **Winning Margins:** Analyze winning margins, vote percentages, and performance variations among candidates who secured victories..

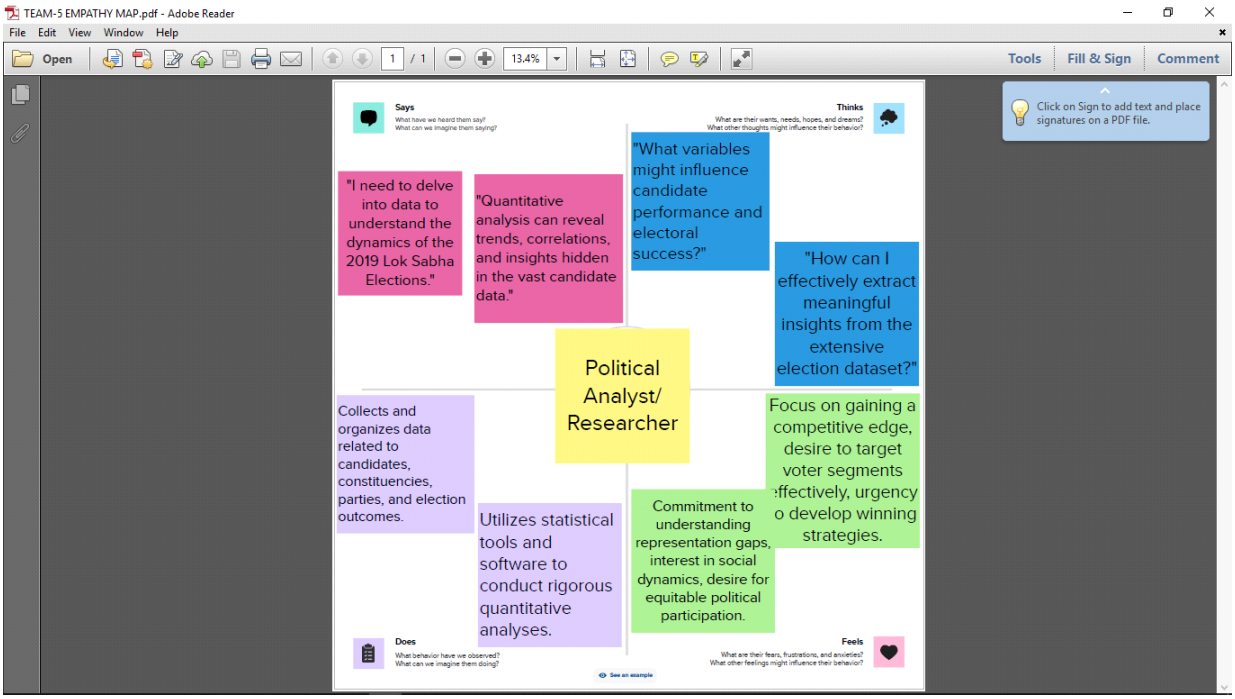
1.1.2 Methodology:

- **Data Collection:** Gathered comprehensive datasets from official election commission records, political party websites, and publicly available candidate profiles.

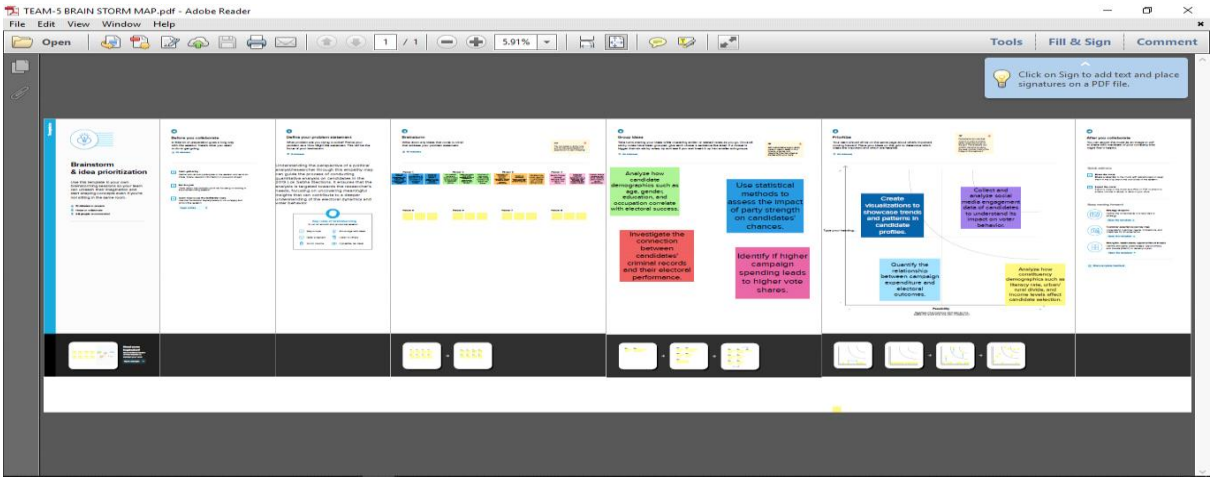
- **Data Cleaning and Integration:** Processed and integrated diverse datasets to create a consolidated dataset suitable for analysis in Tableau.
- **Data Analysis:** Utilized Tableau's visual analytics features to derive insights, patterns, and trends related to the candidates in the 2019 LokSabha elections.
- **Purpose:** The project appears to leverage Tableau for a quantitative analysis of candidates in the 2019 Lok Sabha Elections with the goal of extracting meaningful insights, identifying influential candidates, and potentially informing political strategies or public awareness.

2. PROBLEM DEFINITION & DESIGN THINKING

2.1 Empathy Map



2.2 Ideation & Brainstorming Map



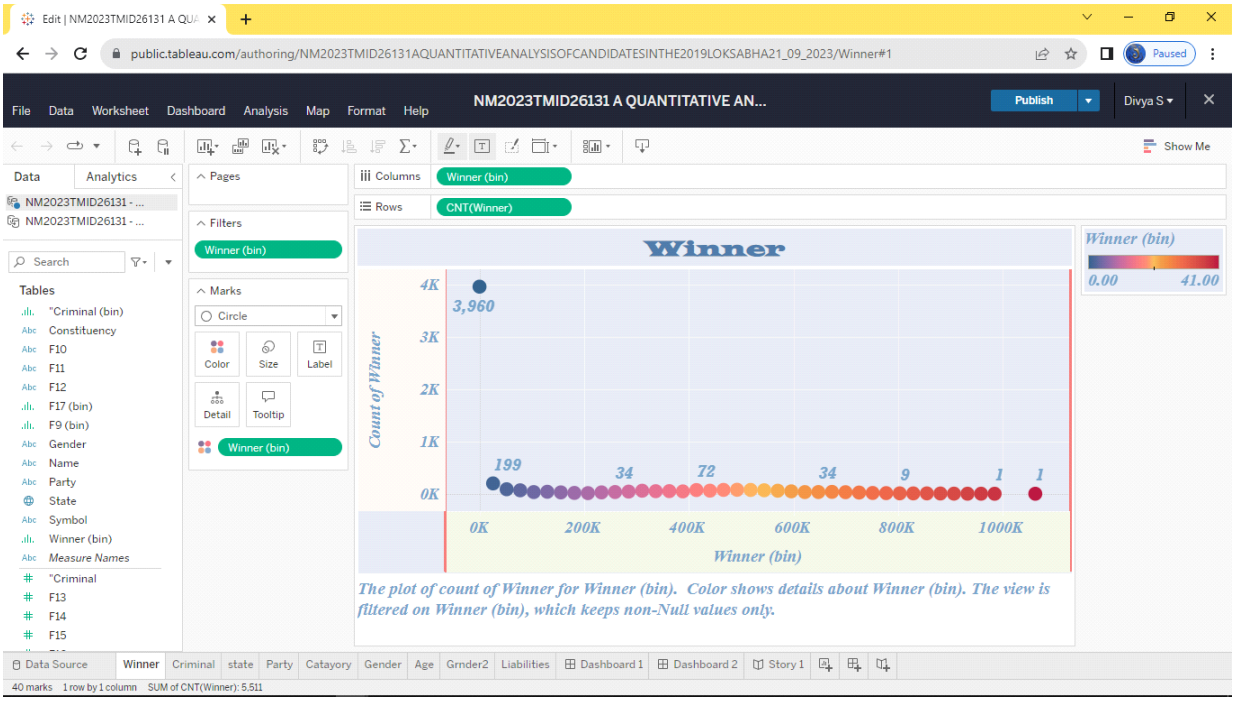
3. RESULT

The process of data preparation for visualization entails several crucial steps. Initially, it involves cleansing the data, removing any irrelevant or missing information. Subsequently, the data is transformed into a format that lends itself to easy visualization. A key aspect of this process is the exploration of the data to uncover inherent patterns and trends. Following this, data filtering is applied to concentrate on specific subsets that are pertinent to the analysis.

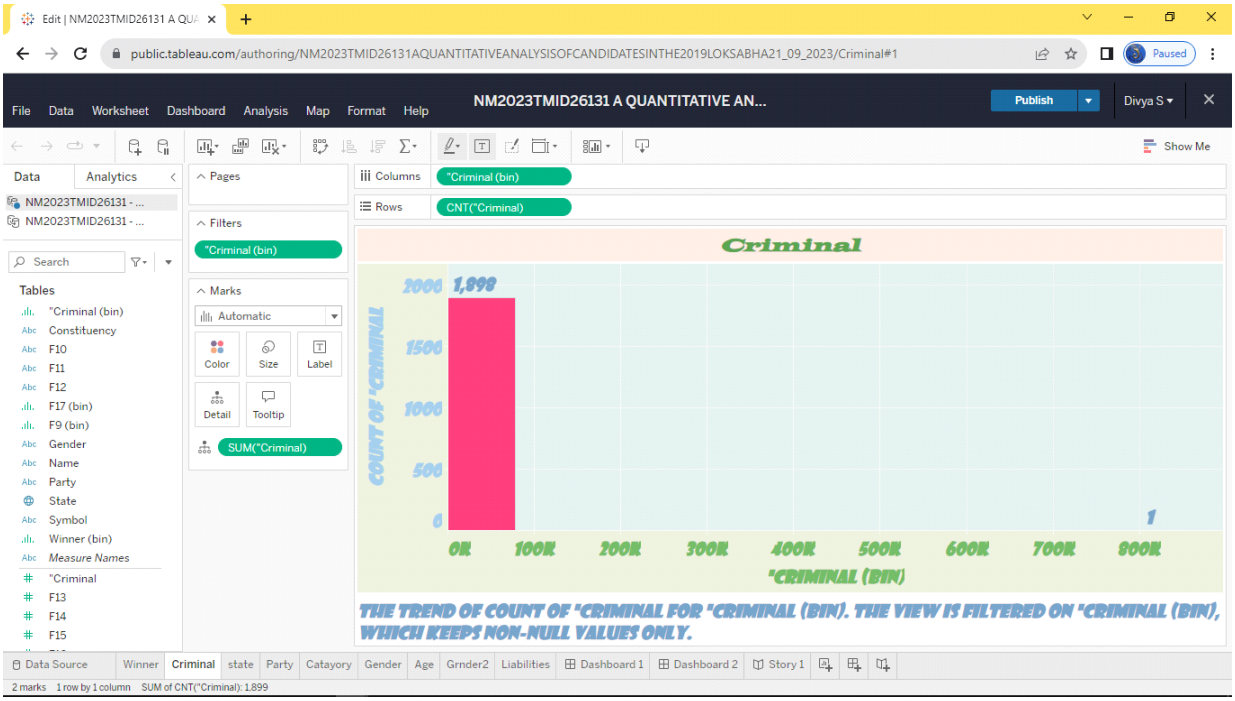
3.1 Visualizations

Data visualization entails crafting graphical depictions of data with the aim of aiding individuals in understanding and exploring the information at hand. The primary objective is to render intricate datasets more accessible, intuitive, and straightforward to interpret. Through the strategic incorporation of visual elements like charts, graphs, and maps, data visualizations expedite the identification of patterns, trends, and outliers within the data, enabling individuals to swiftly grasp the insights embedded in the information.

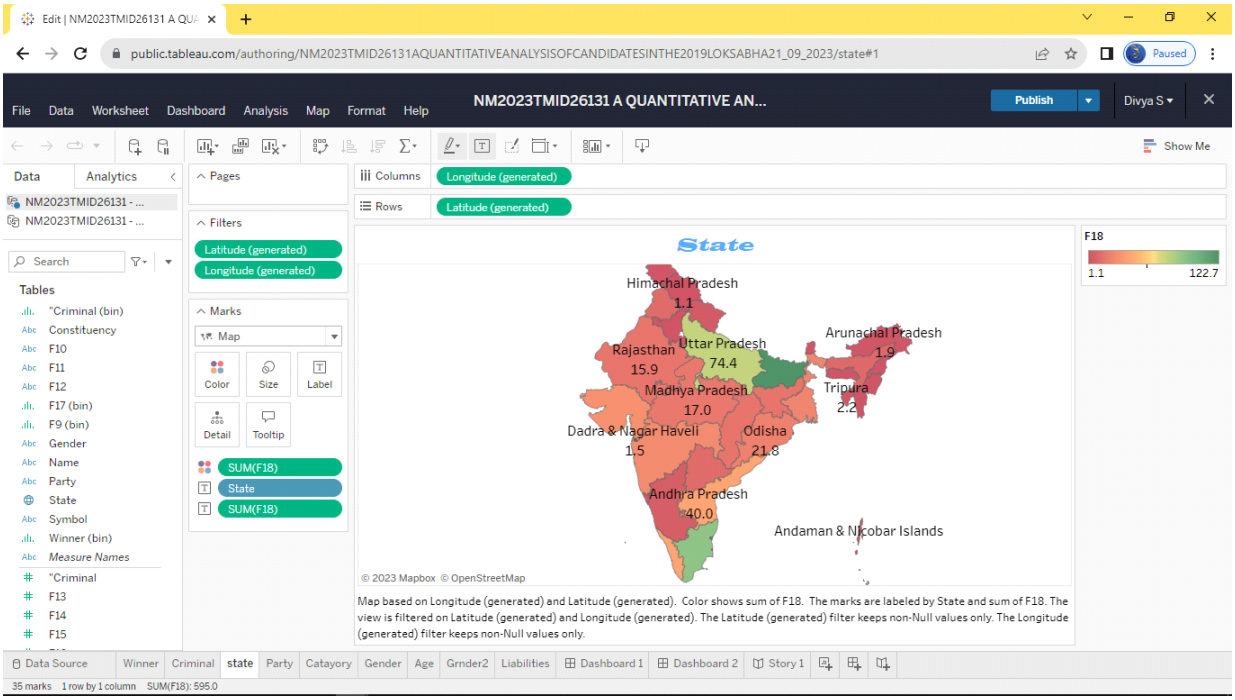
- **Winner**


Edit | NM2023TMID26131 A QUA
public.tableau.com/authoring/NM2023TMID26131AQUANTITATIVEANALYSISOFCANDIDATESINTHE2019LOKSABHA21_09_2023/Winner#1
Paused
File Data Worksheet Dashboard Analysis Map Format Help
NM2023TMID26131 A QUANTITATIVE AN...
Publish
Divya S
Show Me
Data Analytics
NM2023TMID26131 - ...
NM2023TMID26131 - ...
Search
Tables
"Criminal (bin)
Constituency
F10
F11
F12
F17 (bin)
F9 (bin)
Gender
Name
Party
State
Symbol
Winner (bin)
Measure Names
"Criminal
F13
F14
F15
Pages
Filters
Winner (bin)
Marks
Circle
Color
Size
Label
Detail
Tooltip
Winner (bin)
Columns
Winner (bin)
Rows
CNT(Winner)
Winner
Count of Winner
4K
3K
2K
1K
0K
3,960
199
34
72
34
9
1
1
0K
200K
400K
600K
800K
1000K
Winner (bin)
Winner (bin)
0.00
41.00
The plot of count of Winner for Winner (bin). Color shows details about Winner (bin). The view is filtered on Winner (bin), which keeps non-Null values only.
Data Source
Winner
Criminal
state
Party
Catayory
Gender
Age
Grnder2
Liabilities
Dashboard 1
Dashboard 2
Story 1
40 marks
1 row by 1 column
SUM of CNT(Winner): 5,511

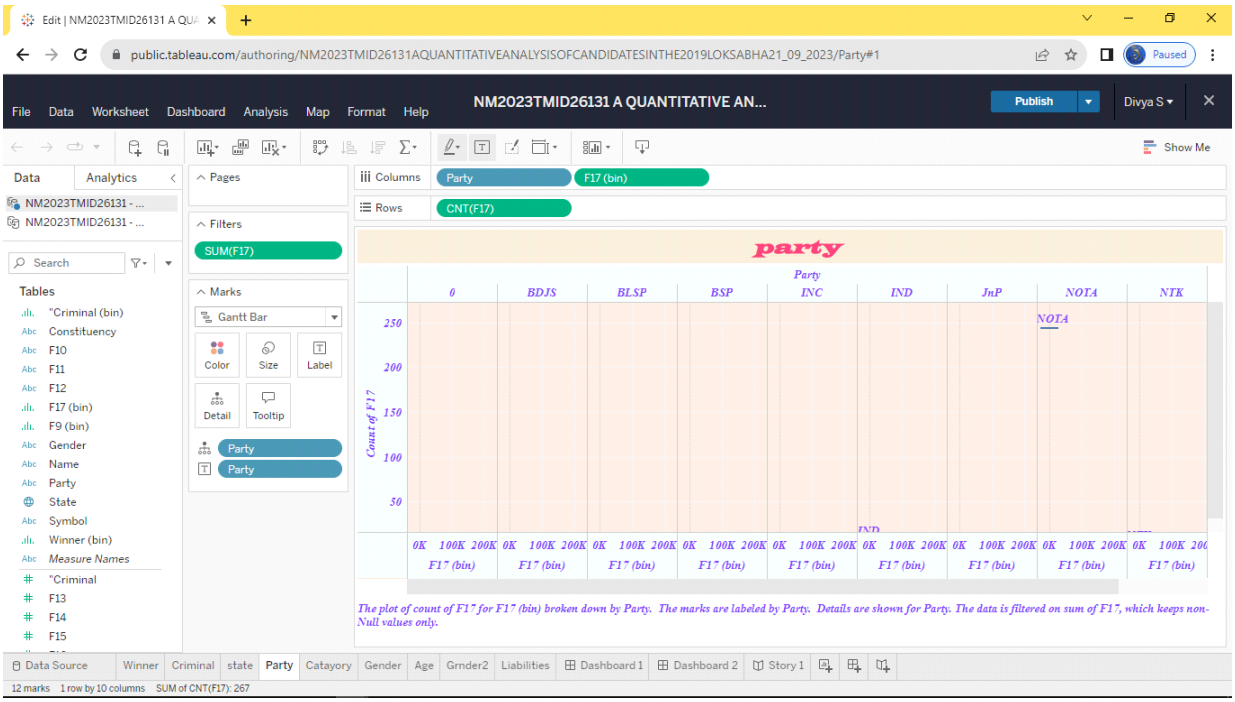
- **Criminal**


Edit | NM2023TMID26131 A QUA
public.tableau.com/authoring/NM2023TMID26131AQUANTITATIVEANALYSISOFCANDIDATESINTHE2019LOKSABHA21_09_2023/Criminal#1
File Data Worksheet Dashboard Analysis Map Format Help
NM2023TMID26131 A QUANTITATIVE AN...
Publish
Divya S
Show Me
Data Analytics
Pages
Filters
"Criminal (bin)
Marks
Automatic
Color Size Label
Detail Tooltip
SUM("Criminal")
Columns "Criminal (bin)
Rows CNT("Criminal")
Criminal
COUNT OF "CRIMINAL
2000 1500 1000 500 0
1,899
1
0K 100K 200K 300K 400K 500K 600K 700K 800K
"CRIMINAL (BIN)
THE TREND OF COUNT OF "CRIMINAL FOR "CRIMINAL (BIN). THE VIEW IS FILTERED ON "CRIMINAL (BIN), WHICH KEEPS NON-NULL VALUES ONLY.
Tables
"Criminal (bin)
Constituency
F10
F11
F12
F17 (bin)
F9 (bin)
Gender
Name
Party
State
Symbol
Winner (bin)
Measure Names
"Criminal
F13
F14
F15
Data Source Winner Criminal state Party Catayory Gender Age Grnder2 Liabilities Dashboard 1 Dashboard 2 Story 1
2 marks 1 row by 1 column SUM of CNT("Criminal"): 1,899

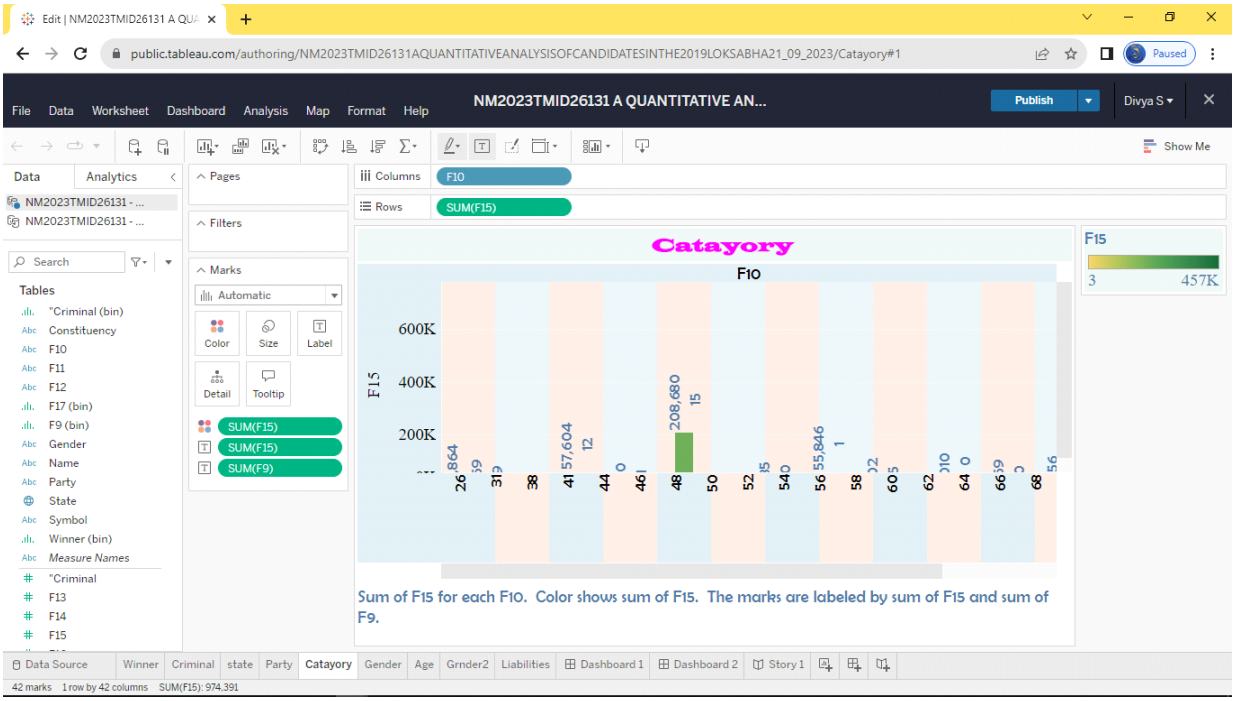
- **State**


Edit | NM2023TMID26131 A QUA
public.tableau.com/authoring/NM2023TMID26131AQUANTITATIVEANALYSISOFCANDIDATESINTHE2019LOKSABHA21_09_2023/state#1
File Data Worksheet Dashboard Analysis Map Format Help
NM2023TMID26131 A QUANTITATIVE AN...
Publish
Divya S
Show Me
Data Analytics
Pages
Filters
Latitude (generated)
Longitude (generated)
Marks
Map
Color Size Label
Detail Tooltip
SUM(F18)
State
SUM(F18)
Columns Longitude (generated)
Rows Latitude (generated)
State
F18
1.1 122.7
Himachal Pradesh 1.1
Rajasthan 15.9
Uttar Pradesh 74.4
Arunachal Pradesh 1.9
Madhya Pradesh 17.0
Tripura 2.2
Dadra & Nagar Haveli 1.5
Odisha 21.8
Andhra Pradesh 40.0
Andaman & Nicobar Islands
© 2023 Mapbox © OpenStreetMap
Map based on Longitude (generated) and Latitude (generated). Color shows sum of F18. The marks are labeled by State and sum of F18. The view is filtered on Latitude (generated) and Longitude (generated). The Latitude (generated) filter keeps non-Null values only. The Longitude (generated) filter keeps non-Null values only.
Tables
"Criminal (bin)
Constituency
F10
F11
F12
F17 (bin)
F9 (bin)
Gender
Name
Party
State
Symbol
Winner (bin)
Measure Names
"Criminal
F13
F14
F15
Data Source Winner Criminal state Party Catayory Gender Age Grnder2 Liabilities Dashboard 1 Dashboard 2 Story 1
35 marks 1 row by 1 column SUM(F18): 595.0

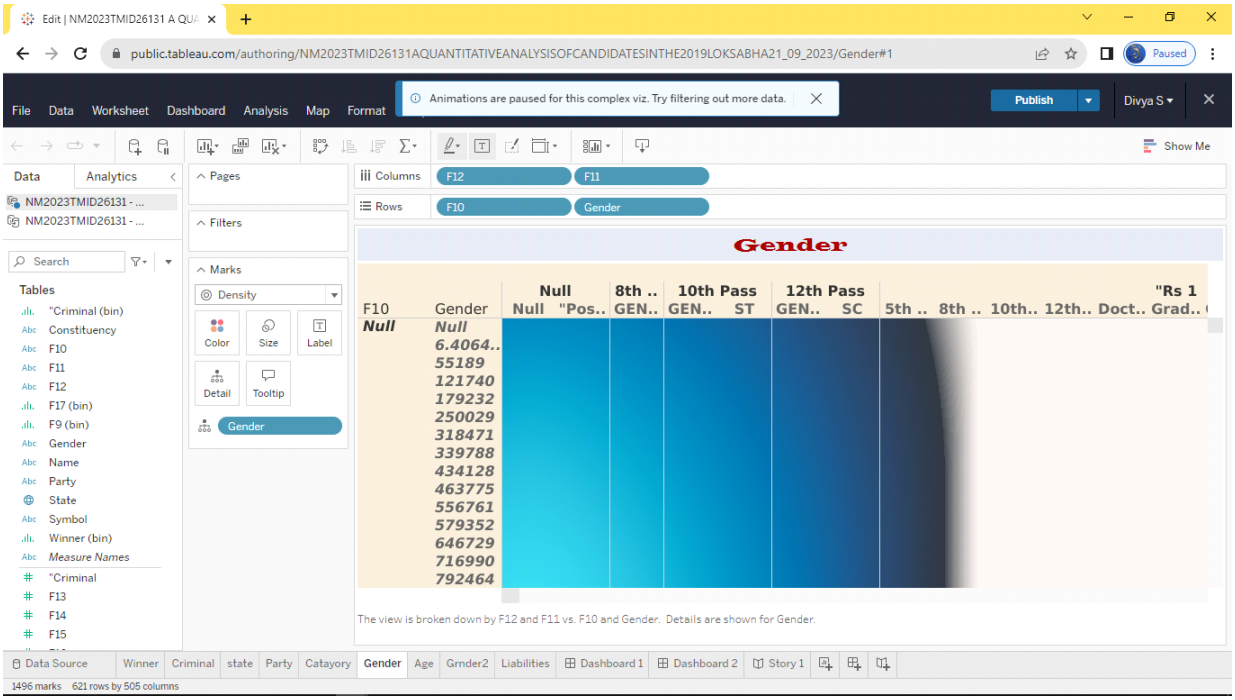
- **Party**



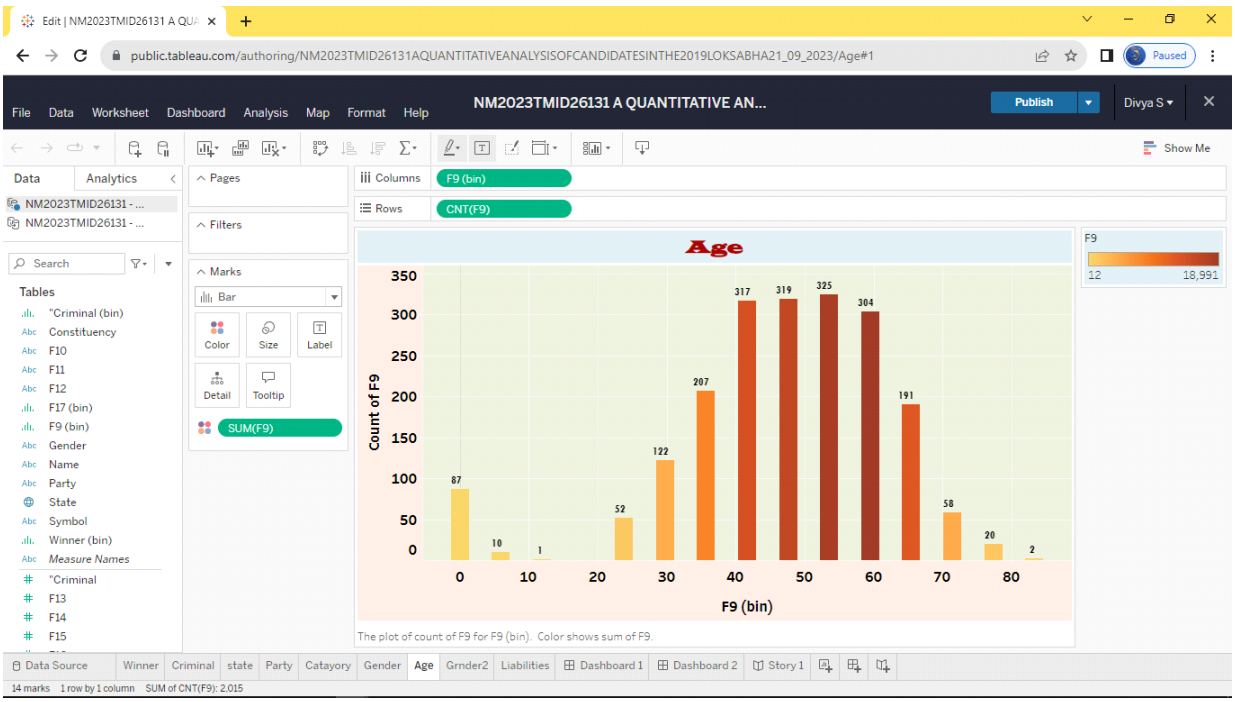
- **Category**


Edit | NM2023TMID26131 A QUA
public.tableau.com/authoring/NM2023TMID26131AQUANTITATIVEANALYSISOFCANDIDATESINTHE2019LOKSABHA21_09_2023/Catayory#1
File Data Worksheet Dashboard Analysis Map Format Help
NM2023TMID26131 A QUANTITATIVE AN...
Publish
Divya S
Show Me
Data Analytics
Pages
Filters
Marks
Automatic
Color Size Label
Detail Tooltip
SUM(F15)
SUM(F15)
SUM(F9)
Columns F10
Rows SUM(F15)
Search
Tables
"Criminal (bin)
Constituency
F10
F11
F12
F17 (bin)
F9 (bin)
Gender
Name
Party
State
Symbol
Winner (bin)
Measure Names
"Criminal
F13
F14
F15
Catayory
F10
F15
600K
400K
200K
F15
3
457K
Sum of F15 for each F10. Color shows sum of F15. The marks are labeled by sum of F15 and sum of F9.
Data Source
Winner
Criminal
state
Party
Catayory
Gender
Age
Grnder2
Liabilities
Dashboard 1
Dashboard 2
Story 1
42 marks 1 row by 42 columns SUM(F15): 974,391

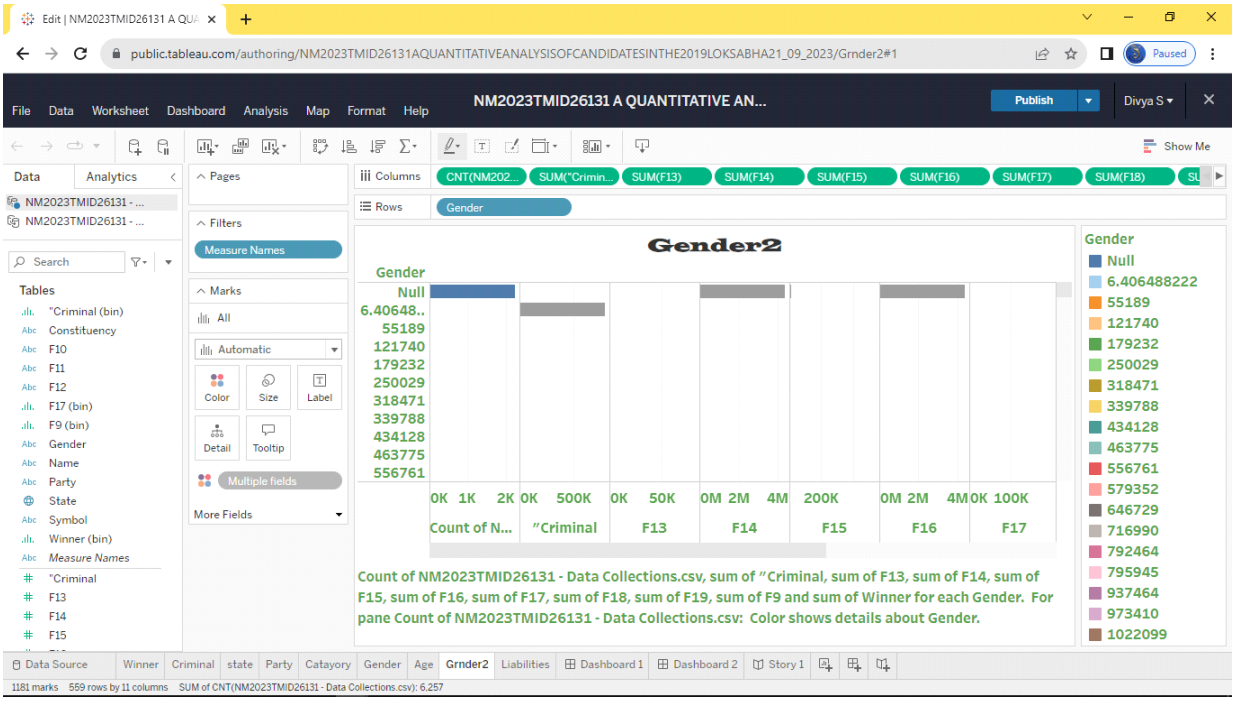
- **Gender**


Edit | NM2023TMID26131 A QUA
public.tableau.com/authoring/NM2023TMID26131AQUANTITATIVEANALYSISOFCANDIDATESINTHE2019LOKSABHA21_09_2023/Gender#1
Animations are paused for this complex viz. Try filtering out more data.
File Data Worksheet Dashboard Analysis Map Format
Publish
Divya S
Show Me
Data Analytics
Pages
Filters
Marks
Density
Color Size Label
Detail Tooltip
Gender
Columns F12 F11
Rows F10 Gender
Search
Tables
"Criminal (bin)
Constituency
F10
F11
F12
F17 (bin)
F9 (bin)
Gender
Name
Party
State
Symbol
Winner (bin)
Measure Names
"Criminal
F13
F14
F15
Gender
F10
Gender
Null
"Pos..
8th ..
GEN..
10th Pass
GEN..
ST
12th Pass
GEN..
SC
5th ..
8th ..
10th..
12th..
Doct..
"Rs 1
Grad..
Null
Null
6.4064..
55189
121740
179232
250029
318471
339788
434128
463775
556761
579352
646729
716990
792464
The view is broken down by F12 and F11 vs. F10 and Gender. Details are shown for Gender.
Data Source
Winner
Criminal
state
Party
Catayory
Gender
Age
Grnder2
Liabilities
Dashboard 1
Dashboard 2
Story 1
1496 marks 621 rows by 505 columns

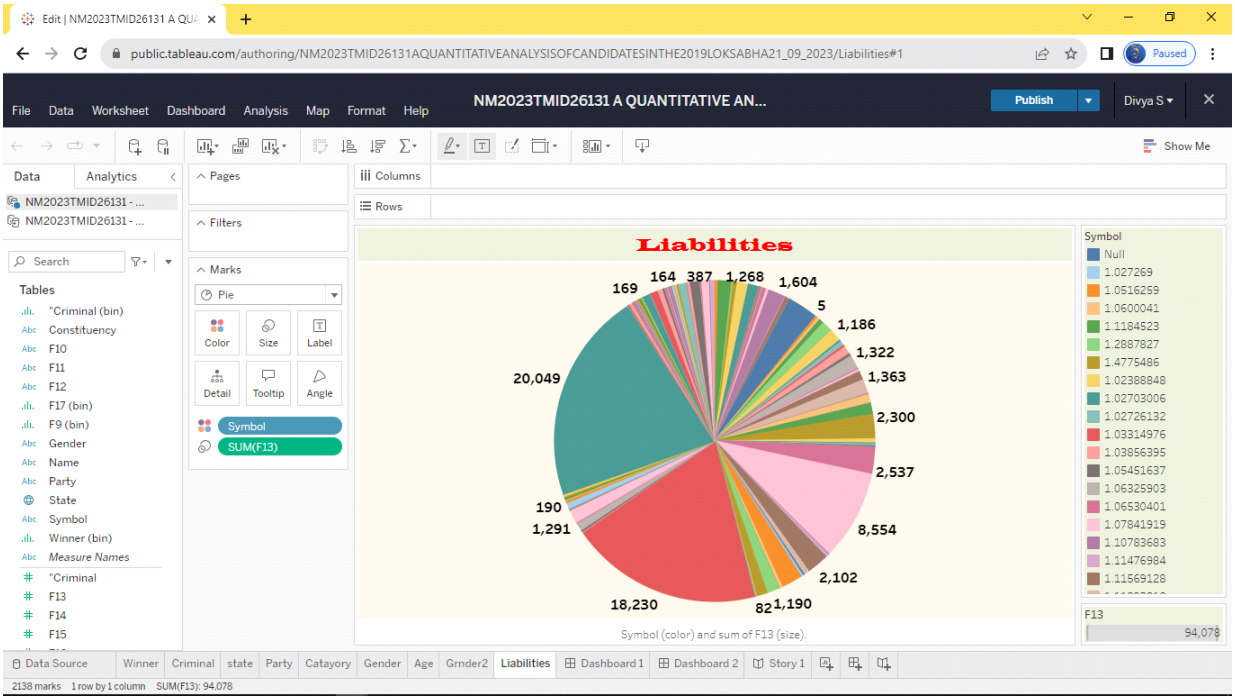
- **Age**


Edit | NM2023TMID26131 A QUA
public.tableau.com/authoring/NM2023TMID26131AQUANTITATIVEANALYSISOFCANDIDATESINTHE2019LOKSABHA21_09_2023/Age#1
Paused
File Data Worksheet Dashboard Analysis Map Format Help
NM2023TMID26131 A QUANTITATIVE AN...
Publish
Divya S
Show Me
Data Analytics
NM2023TMID26131 - ...
NM2023TMID26131 - ...
Search
Tables
"Criminal (bin)
Constituency
F10
F11
F12
F17 (bin)
F9 (bin)
Gender
Name
Party
State
Symbol
Winner (bin)
Measure Names
"Criminal
F13
F14
F15
Pages
Filters
Marks
Bar
Color
Size
Label
Detail
Tooltip
SUM(F9)
Columns
F9 (bin)
Rows
CNT(F9)
Age
Count of F9
F9 (bin)
F9
12
18,991
The plot of count of F9 for F9 (bin). Color shows sum of F9.
Data Source
Winner
Criminal
state
Party
Catayory
Gender
Age
Grnder2
Liabilities
Dashboard 1
Dashboard 2
Story 1
14 marks
1 row by 1 column
SUM of CNT(F9): 2,015

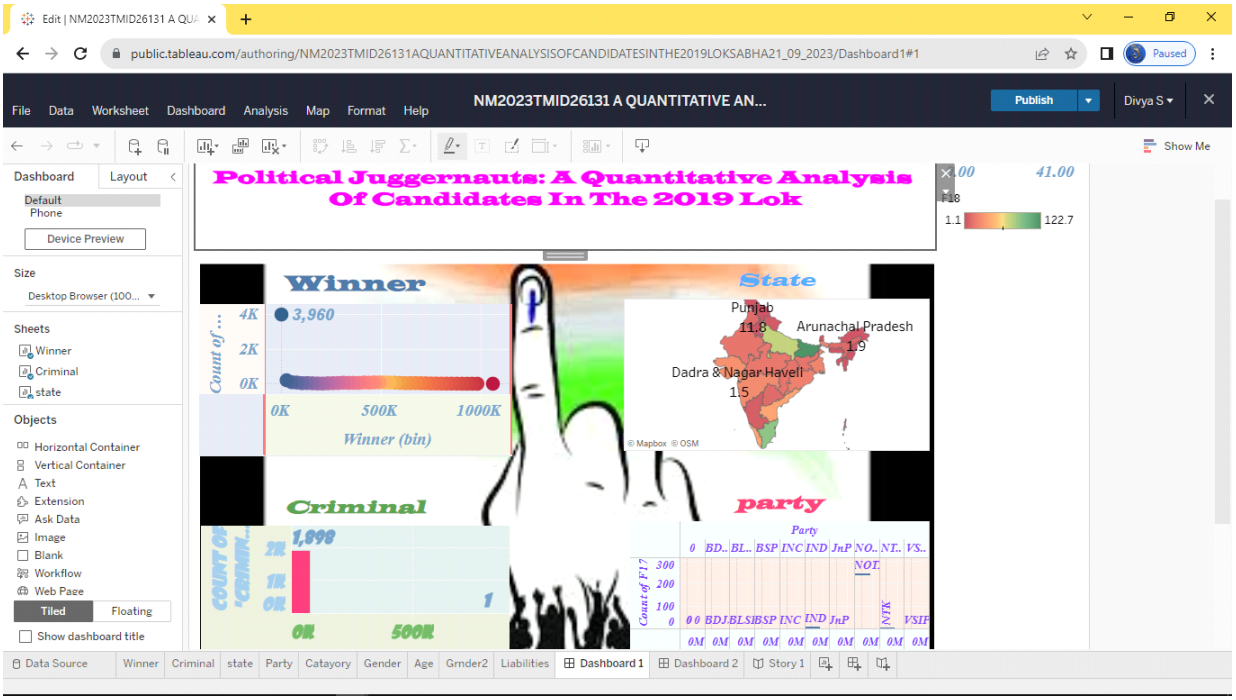
- **Gender2**

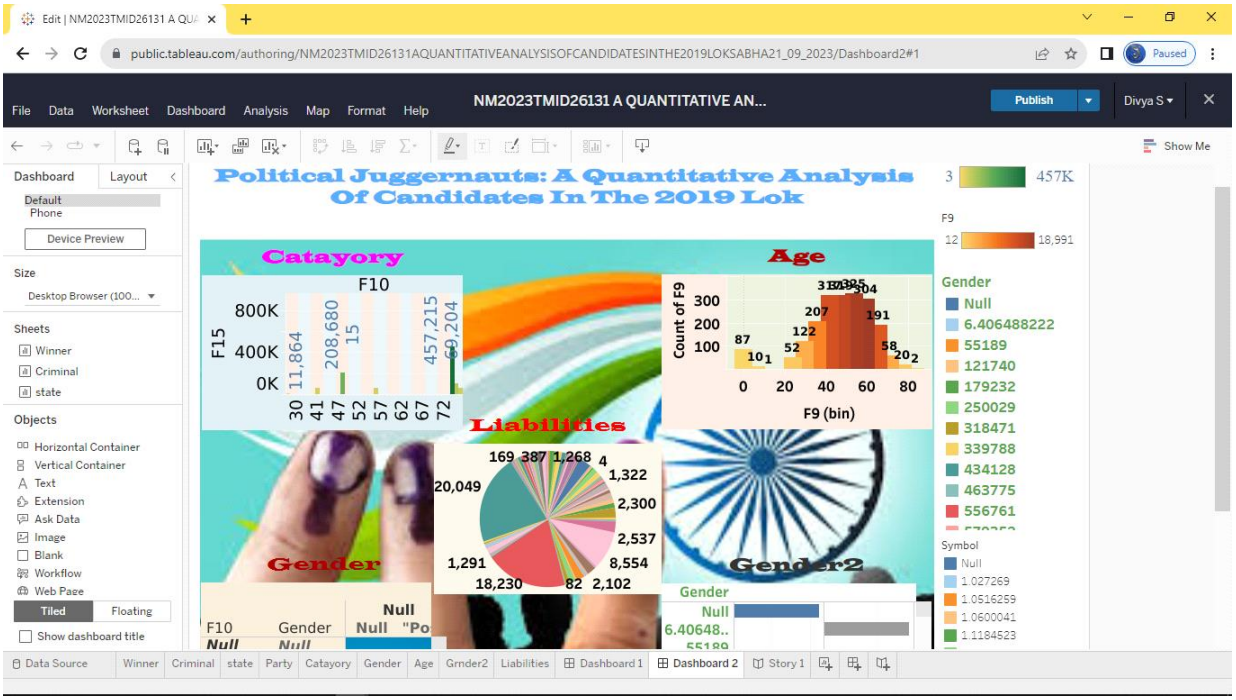


- **Liabilities**

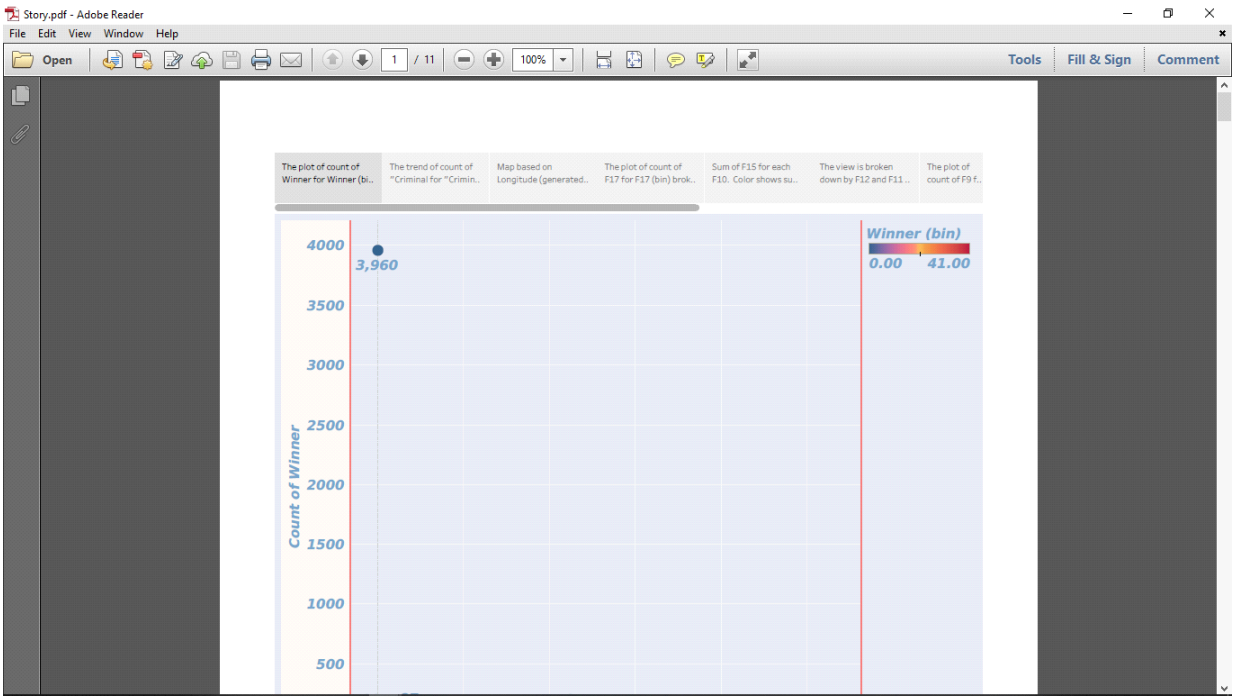


3.2 Dashboard





3.3 Story

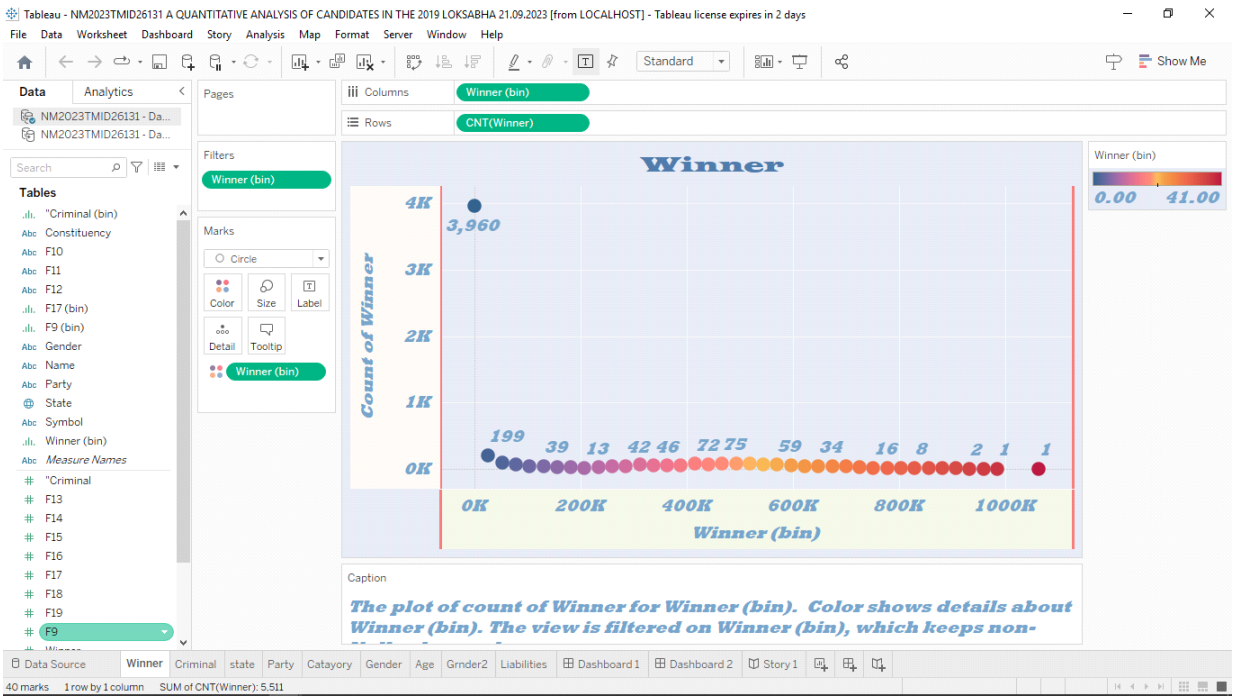


3.4Performance Testing

Amount of Data Rendered to Tableau:

The volume of data presented in Tableau is directly influenced by the dimensions of the dataset.

- **Utilization of Data Filters:**



1

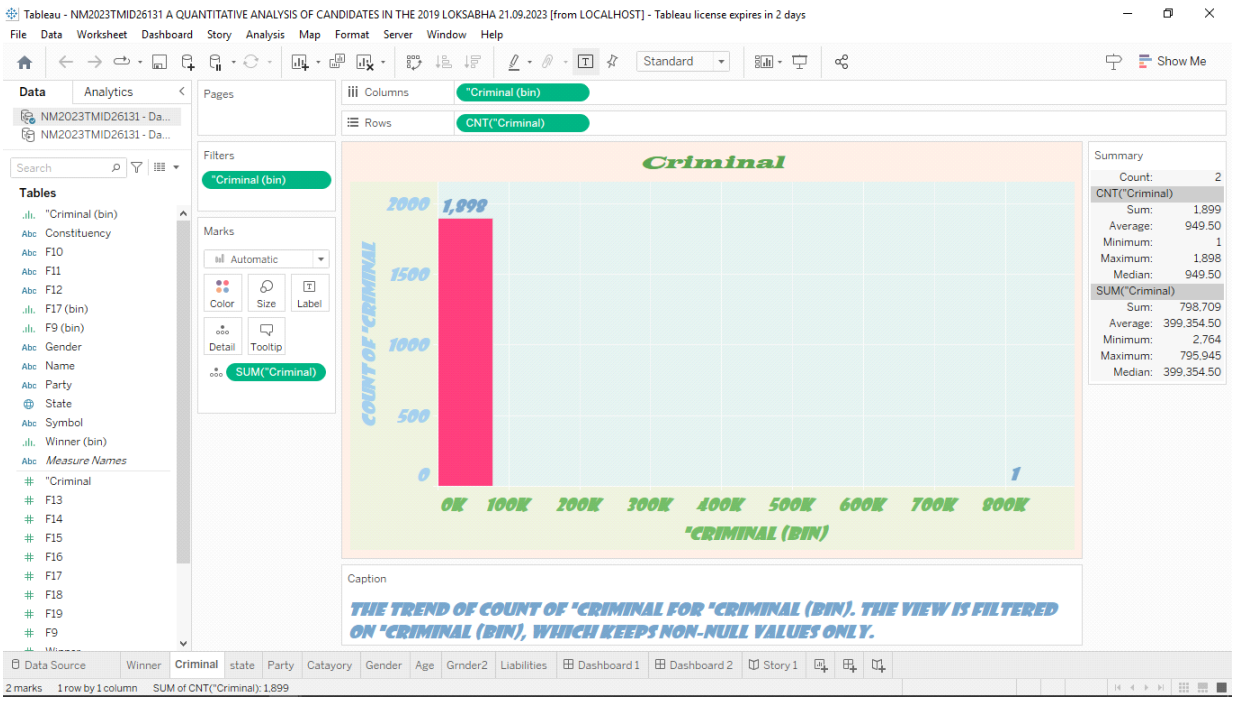


Tableau - NM2023TMID26131 A QUANTITATIVE ANALYSIS OF CANDIDATES IN THE 2019 LOKSABHA 21.09.2023 [from LOCALHOST] - Tableau license expires in 2 days
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Show Me
Data Analytics
Pages
Columns "Criminal (bin)
Rows CNT("Criminal")
Filters "Criminal (bin)
Marks Automatic
Color Size Label Detail Tooltip SUM("Criminal")
Criminal
COUNT OF "CRIMINAL
2000 1500 1000 500 0
1,899
1
0K 100K 200K 300K 400K 500K 600K 700K 800K
"CRIMINAL (BIN)
Summary
Count: 2
CNT("Criminal")
Sum: 1,899
Average: 949.50
Minimum: 1
Maximum: 1,898
Median: 949.50
SUM("Criminal")
Sum: 798,709
Average: 399,354.50
Minimum: 2,764
Maximum: 795,945
Median: 399,354.50
Caption
THE TREND OF COUNT OF "CRIMINAL FOR "CRIMINAL (BIN). THE VIEW IS FILTERED ON "CRIMINAL (BIN), WHICH KEEPS NON-NULL VALUES ONLY.
Tables
"Criminal (bin)
Constituency
F10
F11
F12
F17 (bin)
F9 (bin)
Gender
Name
Party
State
Symbol
Winner (bin)
Measure Names
"Criminal
F13
F14
F15
F16
F17
F18
F19
F9
Data Source Winner Criminal state Party Catayory Gender Age Grnder2 Liabilities Dashboard 1 Dashboard 2 Story 1
2 marks 1 row by 1 column SUM of CNT("Criminal): 1,899

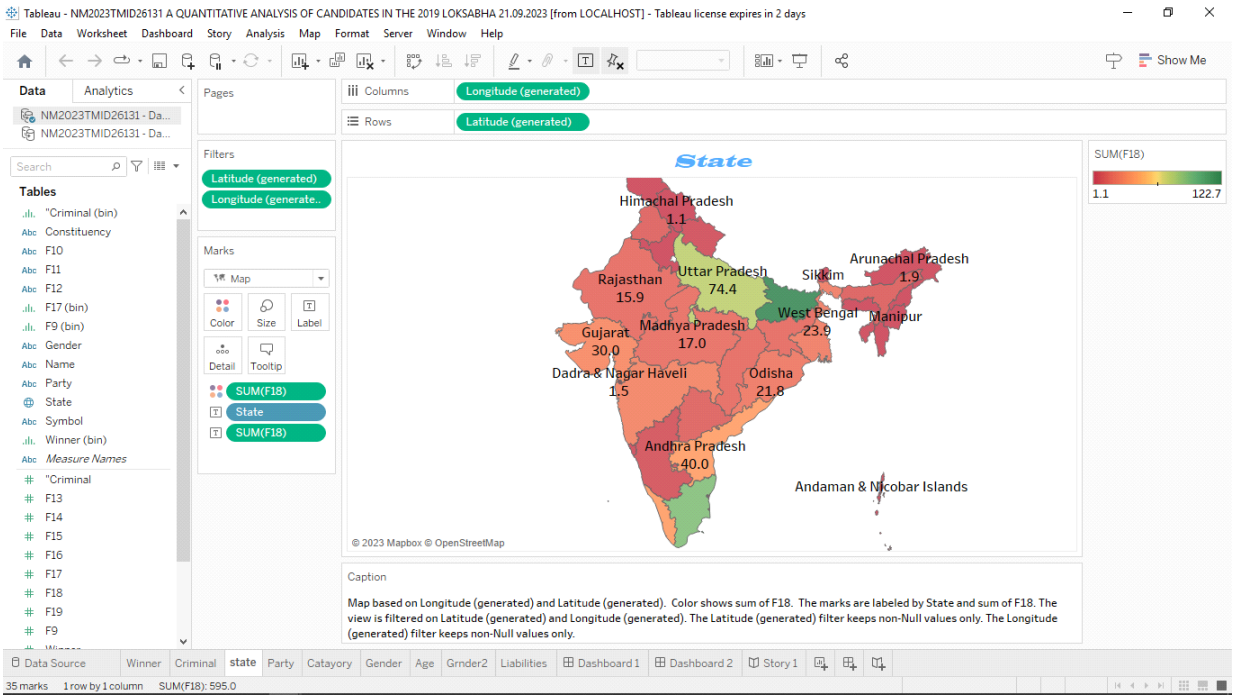


Tableau - NM2023TMID26131 A QUANTITATIVE ANALYSIS OF CANDIDATES IN THE 2019 LOKSABHA 21.09.2023 [from LOCALHOST] - Tableau license expires in 2 days
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Show Me
Data Analytics
Pages
Columns Longitude (generated)
Rows Latitude (generated)
Filters Latitude (generated) Longitude (generate..
Marks Map
Color Size Label Detail Tooltip SUM(F18) State SUM(F18)
State
SUM(F18)
1.1 122.7
Himachal Pradesh 1.1
Rajasthan 15.9
Uttar Pradesh 74.4
Sikkim
Arunachal Pradesh 1.9
West Bengal 23.9
Manipur
Madhya Pradesh 17.0
Gujarat 30.0
Dadra & Nagar Haveli 1.5
Odisha 21.8
Andhra Pradesh 40.0
Andaman & Nicobar Islands
© 2023 Mapbox © OpenStreetMap
Caption
Map based on Longitude (generated) and Latitude (generated). Color shows sum of F18. The marks are labeled by State and sum of F18. The view is filtered on Latitude (generated) and Longitude (generated). The Latitude (generated) filter keeps non-Null values only. The Longitude (generated) filter keeps non-Null values only.
Tables
"Criminal (bin)
Constituency
F10
F11
F12
F17 (bin)
F9 (bin)
Gender
Name
Party
State
Symbol
Winner (bin)
Measure Names
"Criminal
F13
F14
F15
F16
F17
F18
F19
F9
Data Source Winner Criminal state Party Catayory Gender Age Grnder2 Liabilities Dashboard 1 Dashboard 2 Story 1
35 marks 1 row by 1 column SUM(F18): 595.0

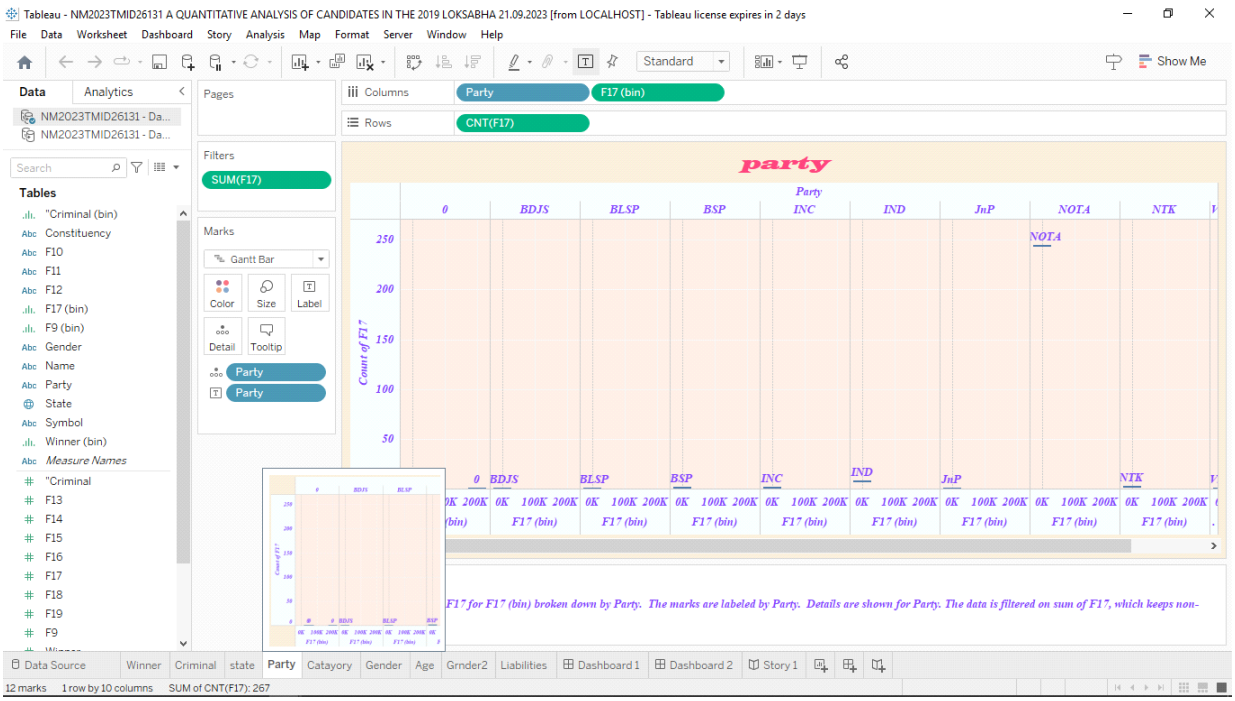


Tableau - NM2023TMID26131 A QUANTITATIVE ANALYSIS OF CANDIDATES IN THE 2019 LOKSABHA 21.09.2023 [from LOCALHOST] - Tableau license expires in 2 days
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Data Analytics
Pages
Filters
SUM(F17)
Marks
Gantt Bar
Color Size Label
Detail Tooltip
Party
Party
Columns
Party
F17 (bin)
Rows
CNT(F17)
party
Party
0 BDJS BLSP BSP INC IND JnP NOTA NTK
Count of F17
F17 (bin)
F17 for F17 (bin) broken down by Party. The marks are labeled by Party. Details are shown for Party. The data is filtered on sum of F17, which keeps non-
Data Source Winner Criminal state Party Catayory Gender Age Grnder2 Liabilities Dashboard 1 Dashboard 2 Story 1
12 marks 1 row by 10 columns SUM of CNT(F17): 267

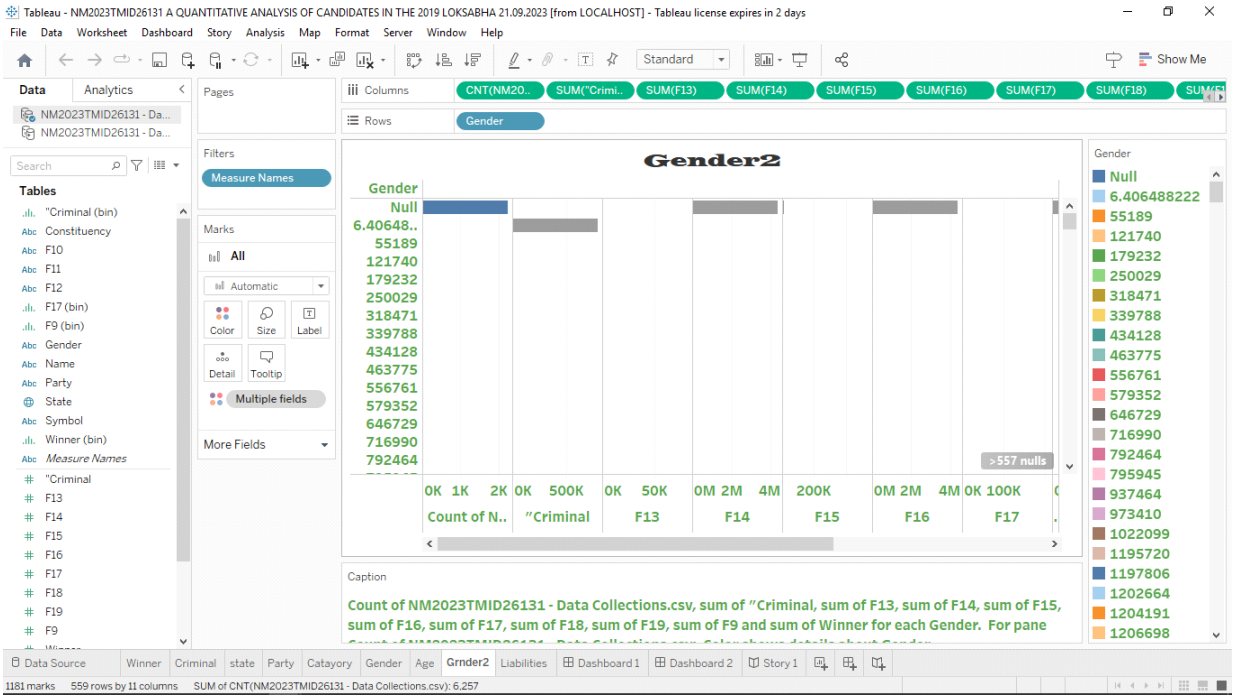


Tableau - NM2023TMID26131 A QUANTITATIVE ANALYSIS OF CANDIDATES IN THE 2019 LOKSABHA 21.09.2023 [from LOCALHOST] - Tableau license expires in 2 days
File Data Worksheet Dashboard Story Analysis Map Format Server Window Help
Data Analytics
Pages
Filters
Measure Names
Marks
All
Automatic
Color Size Label
Detail Tooltip
Multiple fields
More Fields
Columns
CNT(NM20.. SUM("Crimi.. SUM(F13) SUM(F14) SUM(F15) SUM(F16) SUM(F17) SUM(F18)
Rows
Gender
Gender2
Gender
Null 6.40648.. 55189 121740 179232 250029 318471 339788 434128 463775 556761 579352 646729 716990 792464
>557 nulls
Count of N.. "Criminal F13 F14 F15 F16 F17
Gender
Null 6.406488222 55189 121740 179232 250029 318471 339788 434128 463775 556761 579352 646729 716990 792464 795945 937464 973410 1022099 1195720 1197806 1202664 1204191 1206698
Caption
Count of NM2023TMID26131 - Data Collections.csv, sum of "Criminal, sum of F13, sum of F14, sum of F15, sum of F16, sum of F17, sum of F18, sum of F19, sum of F9 and sum of Winner for each Gender. For pane
Data Source Winner Criminal state Party Catayory Gender Age Grnder2 Liabilities Dashboard 1 Dashboard 2 Story 1
1181 marks 559 rows by 11 columns SUM of CNT(NM2023TMID26131 - Data Collections.csv): 6,257

- **No of Visualizations/ Graphs:**
    - **WINNER**
    - **CRIMINAL**
    - **STATE**
    - **PARTY**
    - **CATEGORY**
    - **GENDER**
    - **AGE**
    - **GENDER 2**
    - **LIABILITIES**

4. ADVANTAGES & DISADVANTAGES

4.1 Advantages

Visual Clarity: Tableau's visualizations offer clear and intuitive insights into the quantitative analysis of candidate data, facilitating better comprehension.

Data-Driven Decision-Making: Stakeholders can make informed decisions based on quantitative insights, guiding campaign strategies and policy formulations.

Interactive Exploration: Tableau's interactive features allow users to explore quantitative data dynamically, gaining deeper insights into candidate performance.

Holistic Overview: Dashboards provide a holistic view of candidate metrics, enabling comprehensive quantitative analysis and trend identification.

Efficient Data Analysis: Tableau streamlines quantitative data analysis, making it efficient and accessible to stakeholders with varying levels of technical expertise.

4.2 Disadvantages

Learning Curve: Tableau has a learning curve, and users unfamiliar with the tool may require training to fully exploit its capabilities.

Cost of Licensing: The cost of Tableau licensing can be a constraint, especially for organizations with limited budgets.

Data Security Concerns: Handling sensitive political data requires robust security measures to prevent unauthorized access.

Dependency on Data Quality: The accuracy of insights is highly dependent on the quality of input data, and inaccuracies may lead to misinterpretations.

Resource Intensive: Large datasets and complex visualizations may be resource-intensive, requiring robust computing infrastructure.

5. APPLICATIONS

- Campaign Strategy Planning
- Policy Formulation
- Constituency-Specific Analysis
- Election Commission Oversight
- Political Research and Journalism

6. CONCLUSION

The "A Quantitative Analysis of Candidates in the 2019 LokSabha Elections with Tableau" project successfully harnessed the power of Tableau to unravel key insights into the electoral dynamics of one of the world's largest democratic processes. The findings provide a valuable resource for political analysts, policymakers, and researchers seeking a nuanced understanding of candidate profiles, party dynamics, and regional variations.

This project underscores the transformative impact of data analytics and visualization in unraveling complex electoral landscapes. By leveraging Tableau's capabilities, stakeholders gain access to dynamic, interactive, and visually intuitive tools that facilitate a deeper understanding of the diverse facets of the democratic process.

7. FUTURE SCOPE

"A Quantitative Analysis of Candidates in the 2019 LokSabha Elections with Tableau" offers substantial advantages for stakeholders, but considerations exist. The applications and

future scope indicate the potential for more sophisticated and impactful use of data visualization and analytics in the political domain.

8. APPENDIX:

VIDEO LINK:

https://drive.google.com/file/d/1vflPzfrYcWKIfj1PNMJ2bVF8opR9jyRU/view?usp=sharing

DATA SOURCE LINK:

https://drive.google.com/file/d/1OFJGkTzy2n53eYs70ru2zXgY-5AE5ffR/view?usp=sharing

TABLEAU LINK:

https://public.tableau.com/views/NM2023TMID26131AQUANTITATIVEANALYSISOFCANDIDATESINTHE2019LOKSABHA21_09_2023/Story1?:language=en-USHYPERLINK "https://public.tableau.com/views/NM2023TMID26131AQUANTITATIVEANALYSISOFCANDIDATESINTHE2019LOKSABHA21_09_2023/Story1?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link"&HYPERLINK "https://public.tableau.com/views/NM2023TMID26131AQUANTITATIVEANALYSISOFCANDIDATESINTHE2019LOKSABHA21_09_2023/Story1?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link"publish=yesHYPERLINK "https://public.tableau.com/views/NM2023TMID26131AQUANTITATIVEANALYSISOFCANDIDATESINTHE2019LOKSABHA21_09_2023/Story1?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link"&HYPERLINK "https://public.tableau.com/views/NM2023TMID26131AQUANTITATIVEANALYSISOFCANDIDATESINTHE2019LOKSABHA21_09_2023/Story1?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link":display_count=nHYPERLINK "https://public.tableau.com/views/NM2023TMID26131AQUANTITATIVEANALYSISOFCANDIDATESINTHE2019LOKSABHA21_09_2023/Story1?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link"&HYPERLINK "https://public.tableau.com/views/NM2023TMID26131AQUANTITATIVEANALYSISOFCANDIDATESINTHE2019LOKSABHA21_09_2023/Story1?:language=en-US&publish=yes&:display_count=n&:origin=viz_share_link":origin=viz_share_link