



Resume Project Challenge

#11



Agenda

- Understanding Problem Statement
- Data Set Used
- Generating Insights
- Recommendation



AtliQ Media

Welcome to AtliQ Media, where storytelling meets innovation. As a leading private media company, we specialize in crafting captivating content that resonates with audiences worldwide. Our diverse range of services includes cutting-edge video production, dynamic digital marketing, immersive virtual reality experiences, and impactful news broadcasting.

At AtliQ Media, we believe in the power of a compelling narrative to inform, entertain, and inspire. Our team of creative professionals is dedicated to producing high-quality content that not only captures attention but also drives engagement.

Join us on a journey where creativity knows no bounds and every story finds its voice. Welcome to Visionary Media, where your vision becomes our mission.



Problem Statement

AtliQ Media is a private media company and they wanted to telecast a show on Lok Sabha elections 2024 in India. Unlike other channels they do not want to have a debate on who is going to win this election, they rather wanted to present insights from 2014 and 2019 elections without any bias and discuss less explored themes like voter turnout percentage in India. Me being a data analyst in the company, is handed over this task of generating meaningful insights from data. Since this is a sensitive topic, I seeked help from my manager Tony Sharma who provided the list of primary and secondary questions.



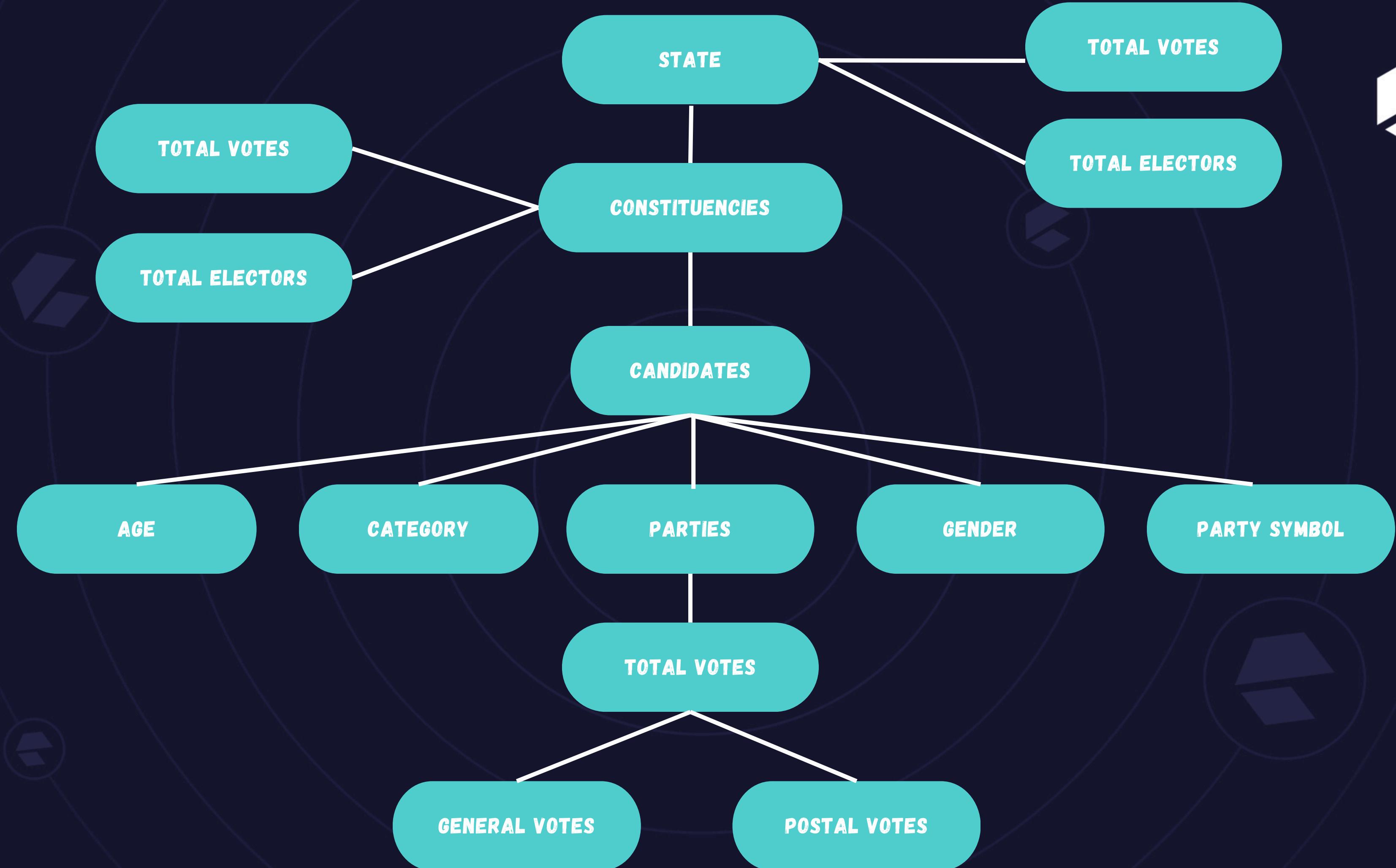
Dataset Used

- In this project, I will analyze **2014** and **2019** Loksabha Election results datasets taken from Election Commission of India.
- In 2014, Andhra Pradesh underwent bifurcation. For simplicity, I have attributed all constituencies from that year to Telangana state. This includes constituencies such as Adilabad, Hyderabad, Warangal, etc., which should be considered part of Telangana rather than Andhra Pradesh for the year 2014.
- In 2014 dataset details for “Odisha” and “Chhattisgarh” are missing.
- Spelling errors like “Dadar & Nagar Haveli” instead of “Dadra & Nagar Haveli”
- Since 'Andhra Pradesh' was bifurcated in 2014, constituencies belonging to 'Telangana' state are mapped using 2019 dataset
- The datasets provided are as follows :-

`constituency_wise_results_2014`

`constituency_wise_results_2019`

`dim_states_codes`



Generating Insights



Primary Questions



1.List Top 5 / Bottom 5 constituencies of 2014 & 2019 in terms of voter turnout ratio



Voter Turnout Ratio

Voter turnout measures the percentage of voters that have actually taken part in an election (the proportion of eligible voters who actually cast a vote).

Votes can be classified into ballot papers which were correctly filled out and those which were incorrectly filled out and therefore counted as invalid.

In certain elections there is a worrying tendency towards very small voter turnouts. Academic and political experts propose various tactics for encouraging voters, one of which is the possibility of a more comfortable voting procedure, such as online elections.



2014

Top 5 constituencies

Constituencies	State	VTR %
Dhubri	Assam	88.35
Ngaland	Nagaland	87.82
Tamluk	West Bengal	87.59
Bishnupur	West Bengal	86.72
Lakshadweep	Lakshadweep	86.61

Bottom 5 constituencies

Constituencies	State	VTR %
Srinagar	Jammu & Kashmir	25.86
Anantnag	Jammu & Kashmir	28.84
Baramulla	Jammu & Kashmir	39.13
Kalyan	Maharastra	42.88
Patna Sahib	Bihar	45.33



2019

Top 5 constituencies

Constituencies	State	VTR %
Dhubri	Assam	88.35
Bishnupur	Nagaland	87.82
Barpeta	West Bengal	87.59
Jalpaiguri	West Bengal	86.72
Arunachal East	Lakshadweep	86.61

Bottom 5 constituencies

Constituencies	State	VTR %
Anantnag	Jammu & Kashmir	8.94
Srinagar	Jammu & Kashmir	14.43
Baramulla	Jammu & Kashmir	34.57
Hyderabad	Telangana	44.84
Kalyan	Maharastra	45.29

Sharp Decline in Voter Turnout Marks Steady Fall of Mainstream Politics in Kashmir

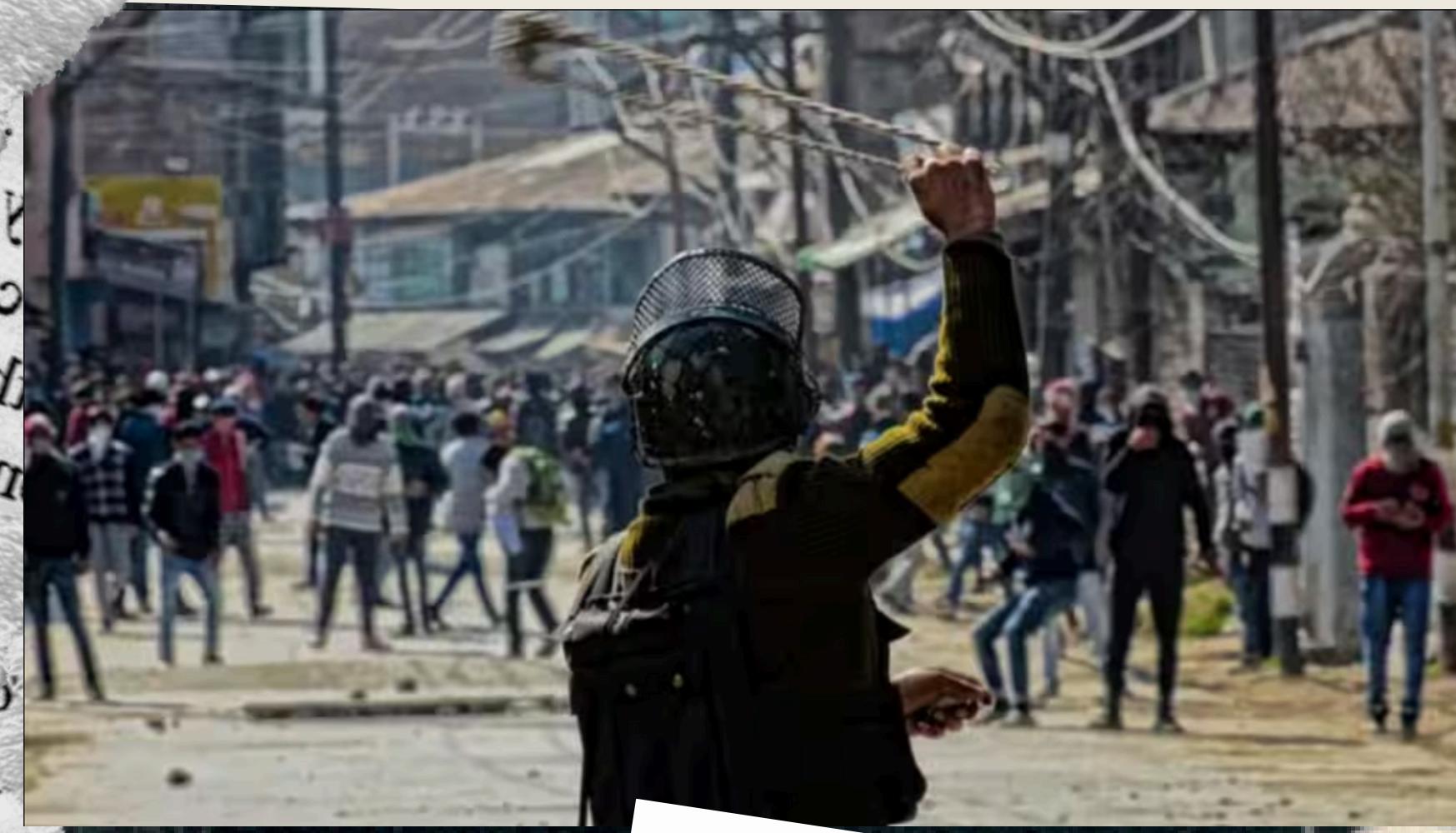
8

Mudasir Ahm

18/May/2019 • 5 min read



While 80.9% voters boycotted the elections across Kashmir, the turnout was just 8.76% in the militant hotbed of Anantnag.



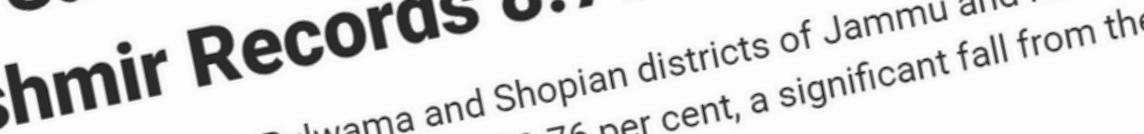
There were concerns over security that prompted the spread out the voting in Anantnag across three phases took place at a polling booth in Rohmoo in Pulwama a station in Tral area. There were no casualties in either

lok Sabha Polls: Anantnag In Jammu Kashmir Records 8.76 Per Cent Voter

Lok Sabha Polls: Kashmir Records 8.76 Per Cent Turnout

ing in militancy-hit Pulwama and Shopian districts of Jammu and Kashmir's Anantnag constituency ended with a turnout of 8.76 per cent, a significant fall from the turnout it recorded during the 2014 Lok Sabha election

India | Edited by Chandrashekhar Srinivasan | Updated: May 06, 2019 9:52 pm IST



TRE



Tale Of 2 Pics: Nitish
Kumar, Tejashwi
Yadav Sit Together C
Delhi Flight

Lok Sabha Election
Results Live Update
Nitish Kumar To
INDA Meet



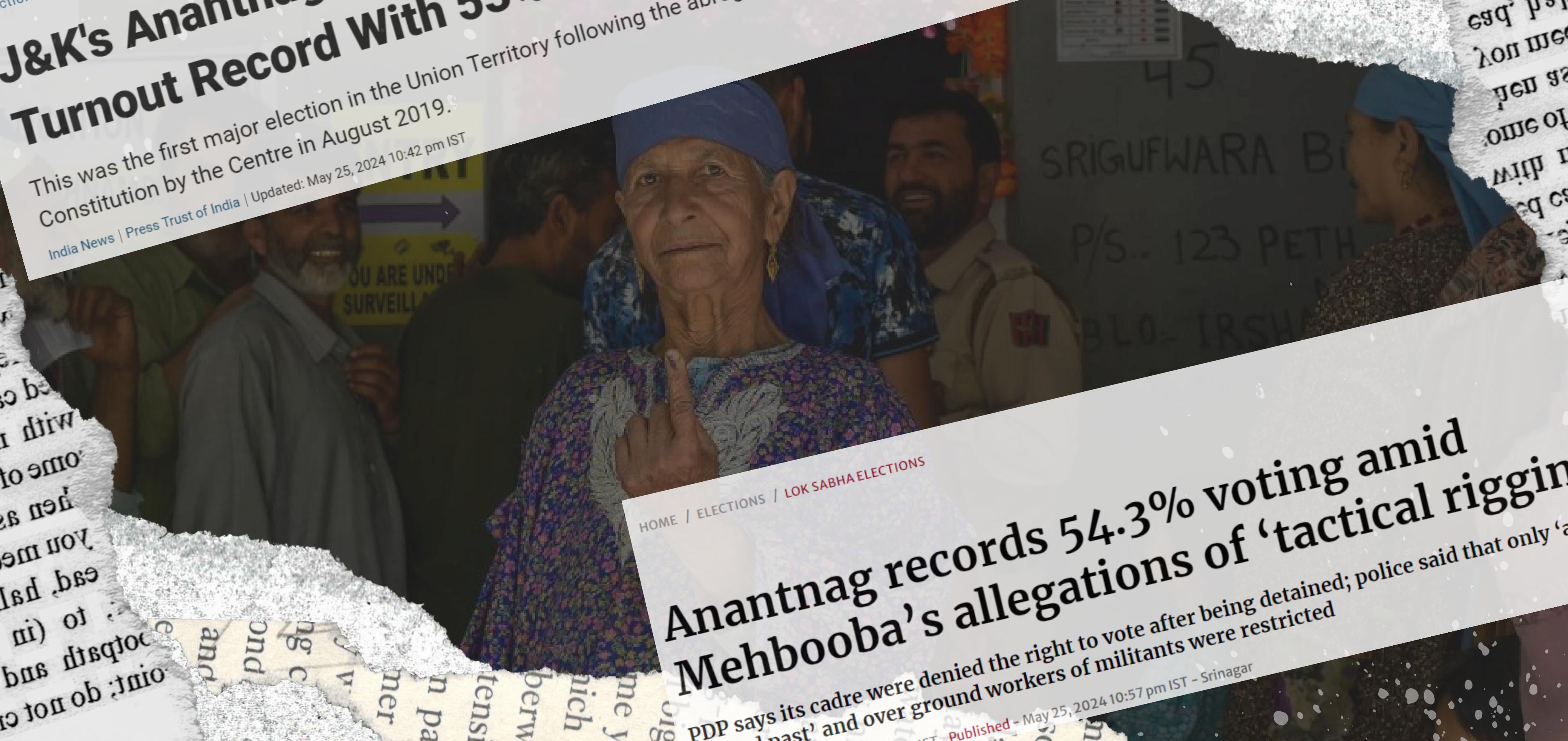
ity concerns and fear of attack in Pulwama in which

Pulwama, Jammu a

J&K's Anantnag-Rajouri Seat "Shatters" Turnout Record With 53% Polling

This was the first major election in the Union Territory following the abrogation of Article 370 of the Constitution by the Centre in August 2019.

India News | Press Trust of India | Updated: May 25, 2024 10:42 pm IST



HOME / ELECTIONS / LOK SABHA ELECTIONS

Anantnag records 54.3% voting amid Mehbooba's allegations of 'tactical rigging'

PDP says its cadre were denied the right to vote after being detained; police said that only 'a few' and over ground workers of militants were restricted

Published - May 25, 2024 10:57 pm IST - Srinagar

2. List Top 5 / Bottom 5 states of 2014 & 2019 in terms of voter turnout ratio

2014

Top 5 States

State	VTR %
Nagaland	87.82
Lakshadweep	86.61
Tripura	84.72
Dadra & Nagar Haveli	84.07
Sikkim	83.33

Bottom 5 States

State	VTR %
Jammu & Kashmir	49.66
Bihar	56.25
Uttar Pradesh	58.42
Maharastra	60.29
Madhya Pradesh	61.59



2019

Top 5 States

State	VTR %
Lakshadweep	85.18
Manipur	82.54
Nagaland	82.91
Tripura	82.35
West Bengal	81.72

Bottom 5 States

State	VTR %
Jammu & Kashmir	44.84
Bihar	57.30
Uttar Pradesh	59.18
NCT of Delhi	60.58
Maharashtra	60.96

3. Which Constituencies have elected the same party for two consecutive elections. Rank them by % of votes to the winning party in 2019



2019

Top 5 constituencies

Constituencies	State	Party	% of votes to winning party
Surat	Gujrat	BJP	 74.47
Navsari	Gujrat	BJP	 74.37
Vadodara	Gujrat	BJP	 72.30
Kangra	Himachal Pradesh	BJP	 72.02
Bhilwara	Rajasthan	BJP	 71.59

4. Which Constituencies have voted for different parties in two consecutive elections. List Top 10 based on difference in winner vote % in two elections.



Top 10 constituencies (2019)

Constituencies	Party elected in 2014	Party elected in 2019	Difference in winner vote%
Alipurdas	AITC	BJP	24.78
Autonomous District	INC	BJP	22.50
Kanniyakumari	BJP	INC	22.19
Puducherry	AINRC	INC	21.70
Bhagalpur	RJD	JD(U)	21.56
Sambhal	BJP	SP	21.52
Jhanjharpur	BJP	JD(U)	21.16
Chikkballapur	INC	BJP	20.15
Ghazipur	BJP	BSP	20.09
Supaul	INC	JD(U)	19.48

5. Top 5 candidates based on Margin Difference with runners in 2014 & 2019

Margin Of Victory(MoV)

An electoral margin-of-victory (MOV) is the difference between the share of votes cast for the winning candidate and the second-place candidate in an election. For example, if Candidate A wins an election with 55 percent of the vote and Candidate B, the second-place finisher, wins 45 percent of the vote, the winner's margin of victory is 10 percent. Margins of victory can be used to measure electoral competitiveness, political party or candidate strength, and, indirectly, the popularity of a particular policy or set of policies.

$$\text{Mov} = (\% \text{ of votes to winning candidate} - \% \text{ of votes to runners-up candidate})$$

$$\text{Mov} = \left(\frac{\text{SUM OF TOTAL VOTES TO WINNING CANDIDATE}}{\text{TOTAL VOTES POLLED IN THAT CONSTITUENCY}} \right) - \left(\frac{\text{SUM OF TOTAL VOTES TO RUNNER-UP CANDIDATE}}{\text{TOTAL VOTES POLLED IN THAT CONSTITUENCY}} \right)$$



2014

Top 5 candidates based on Margin Difference

Candidate	Constituencies	Margin
Narendra Modi	Vadodara	570128
Vijay Kumar Singh	Ghaziabad	567260
C. R. Patil	Navsari	558116
Ramcharan Bohara	Jaipur	539345
Darshan Vikram Jardosh	Surat	533190

Top 5 candidates based on MoV

Candidate	Constituencies	MoV %
Darshan Vikram Jardosh	Surat	56.25
Jitendra Chaudhury	Tripura East	50.93
Narendra Modi	Vadodara	49.08
C. R. Patil	Navsari	48.08
Gopal Chinayya Shetty	Mumbai North	47.18

2019



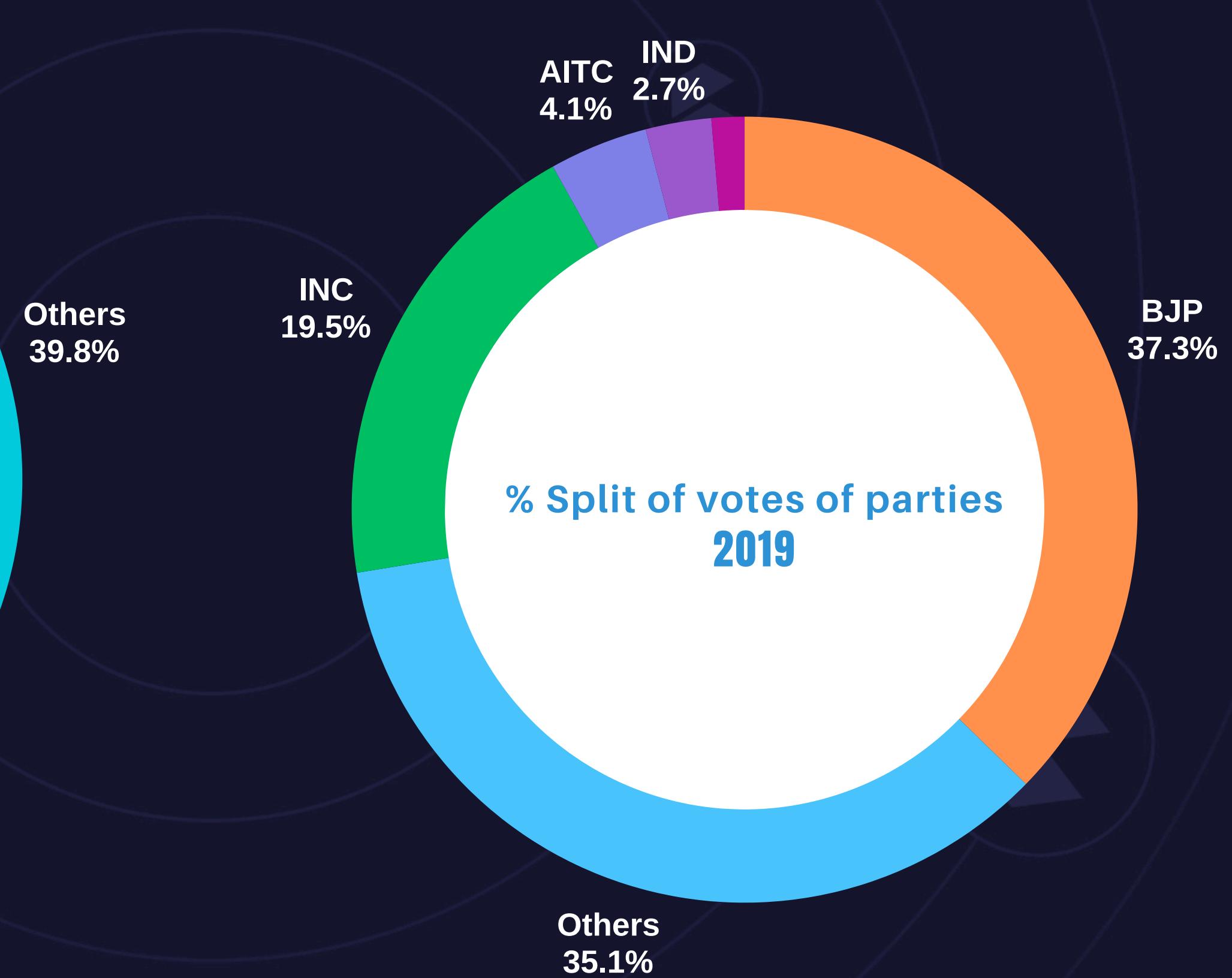
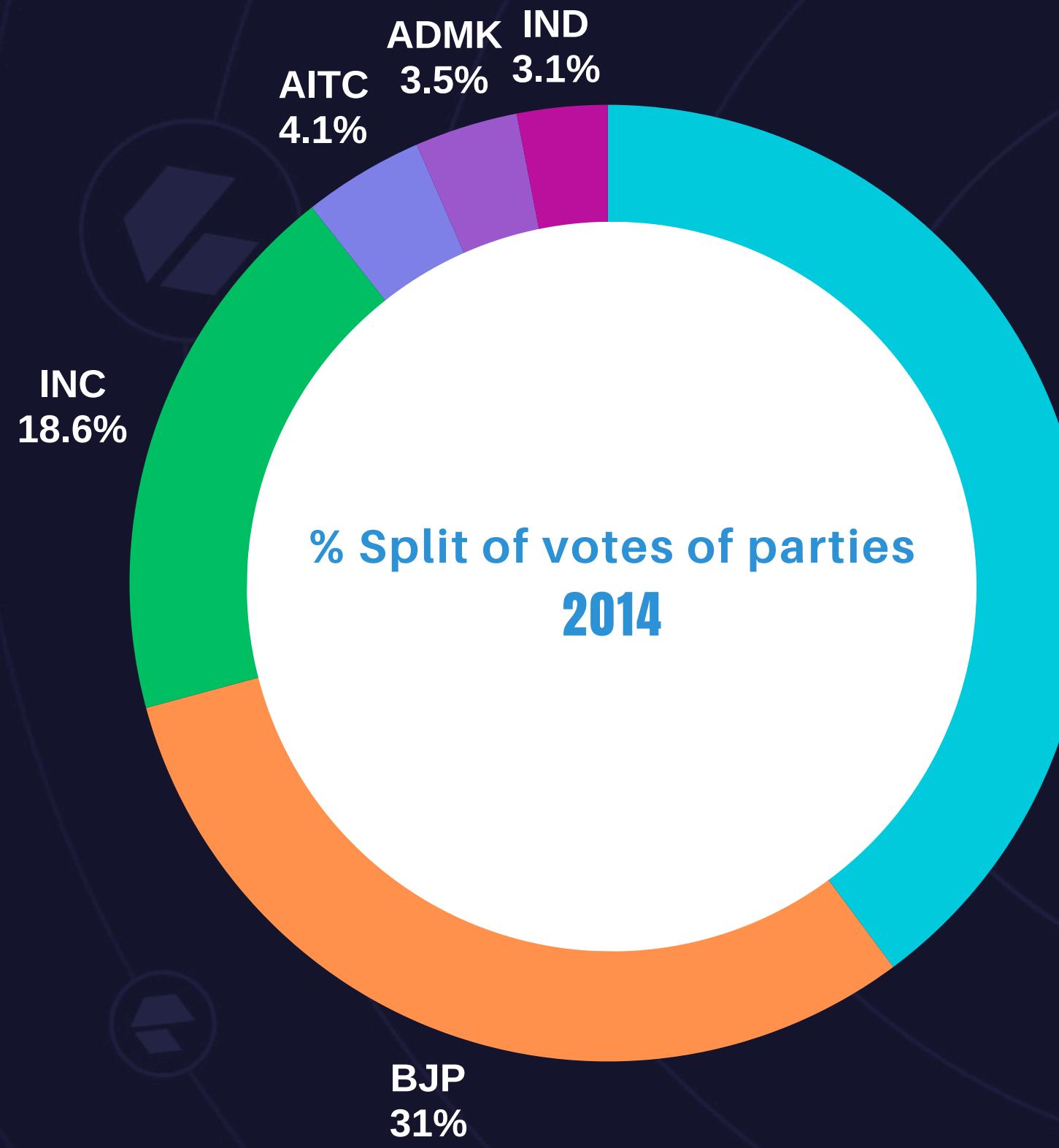
Top 5 candidates based on Margin Difference

Candidate	Constituencies	Margin
C. R. Patil	Navsari	689668
Sanjay Bhatia	Karnal	656142
Krishan Pal	Faridabad	638239
Subhash Chandra Baheria	Bhilwara	612000
Ranjanben Bhatt	Vadodara	589177

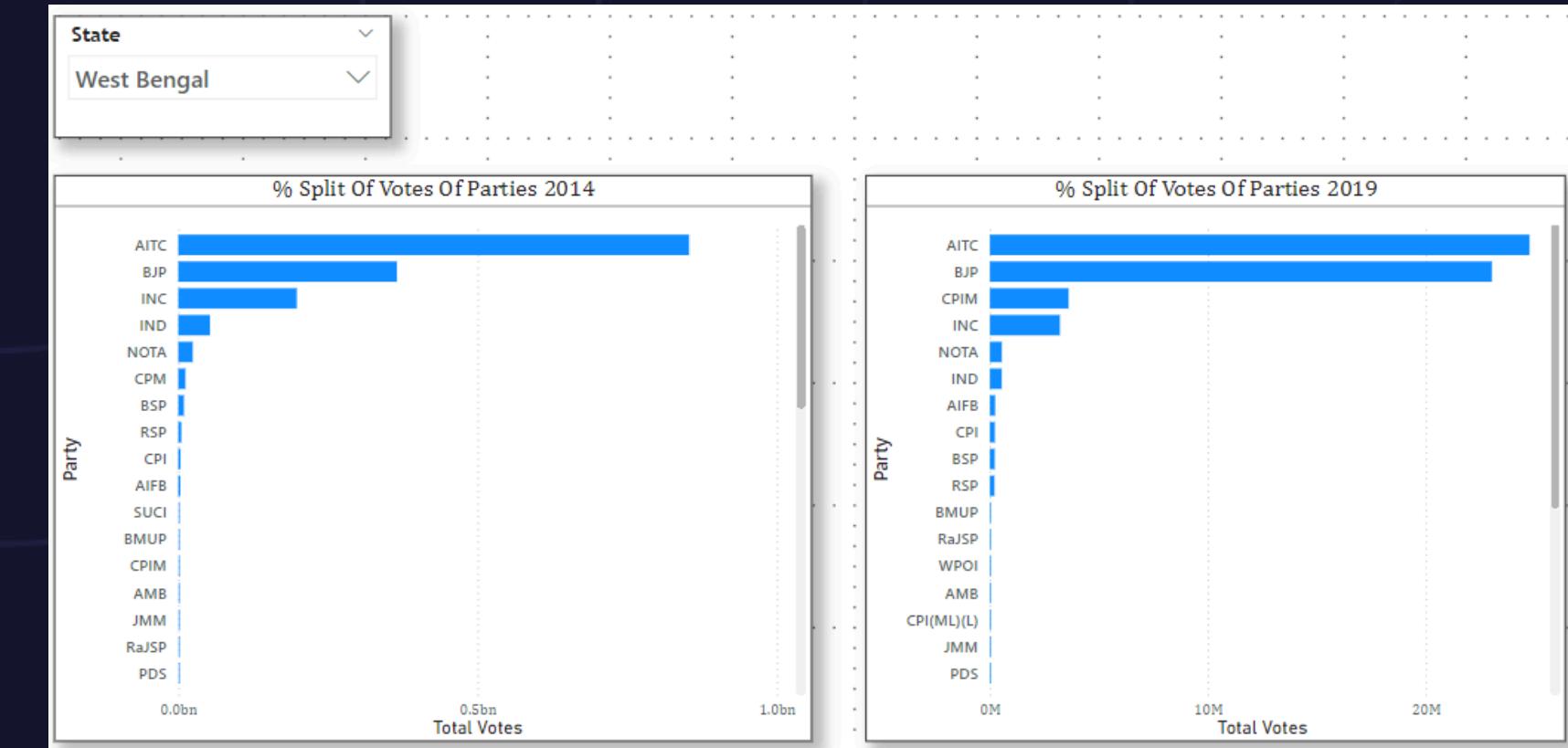
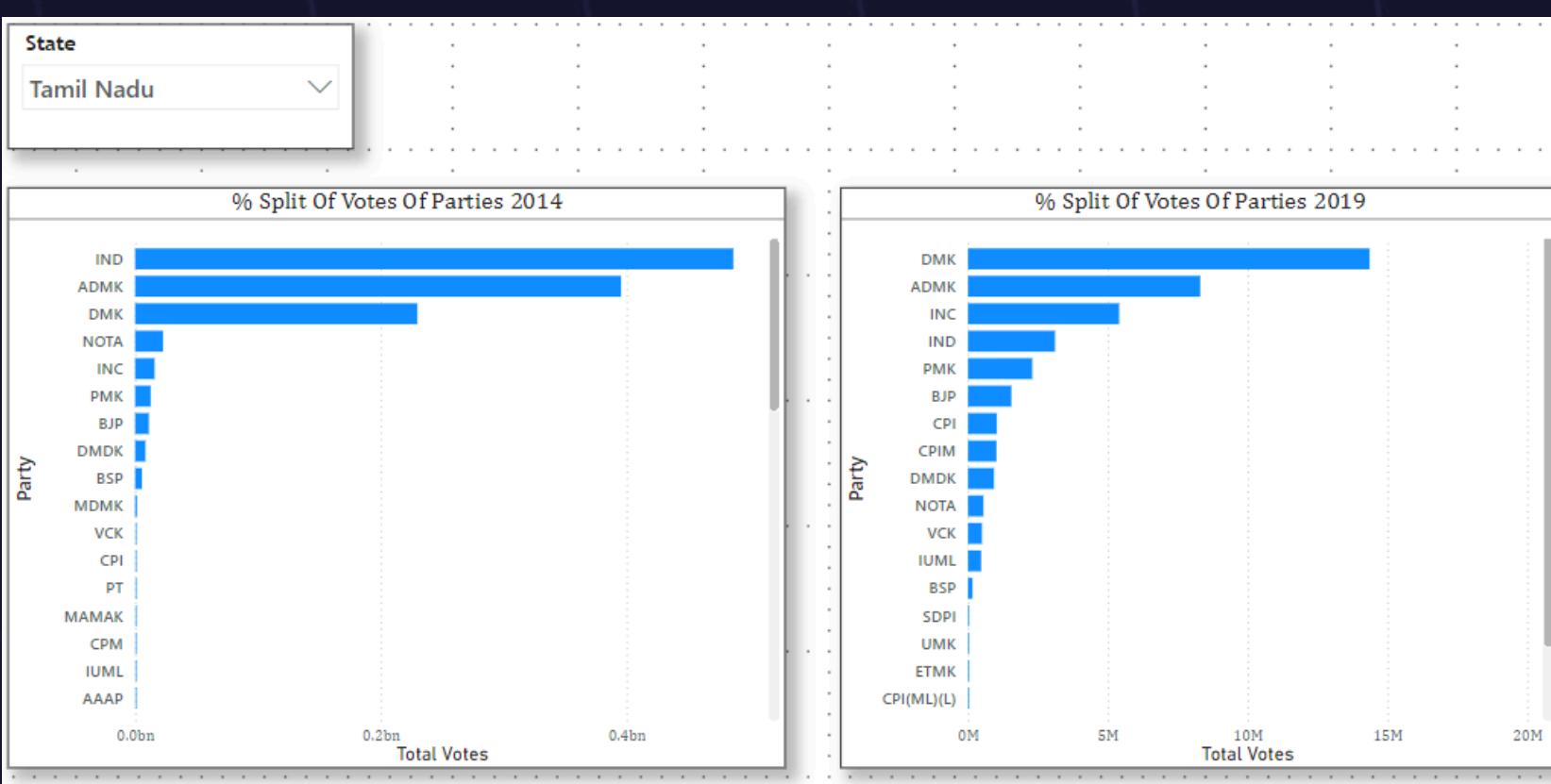
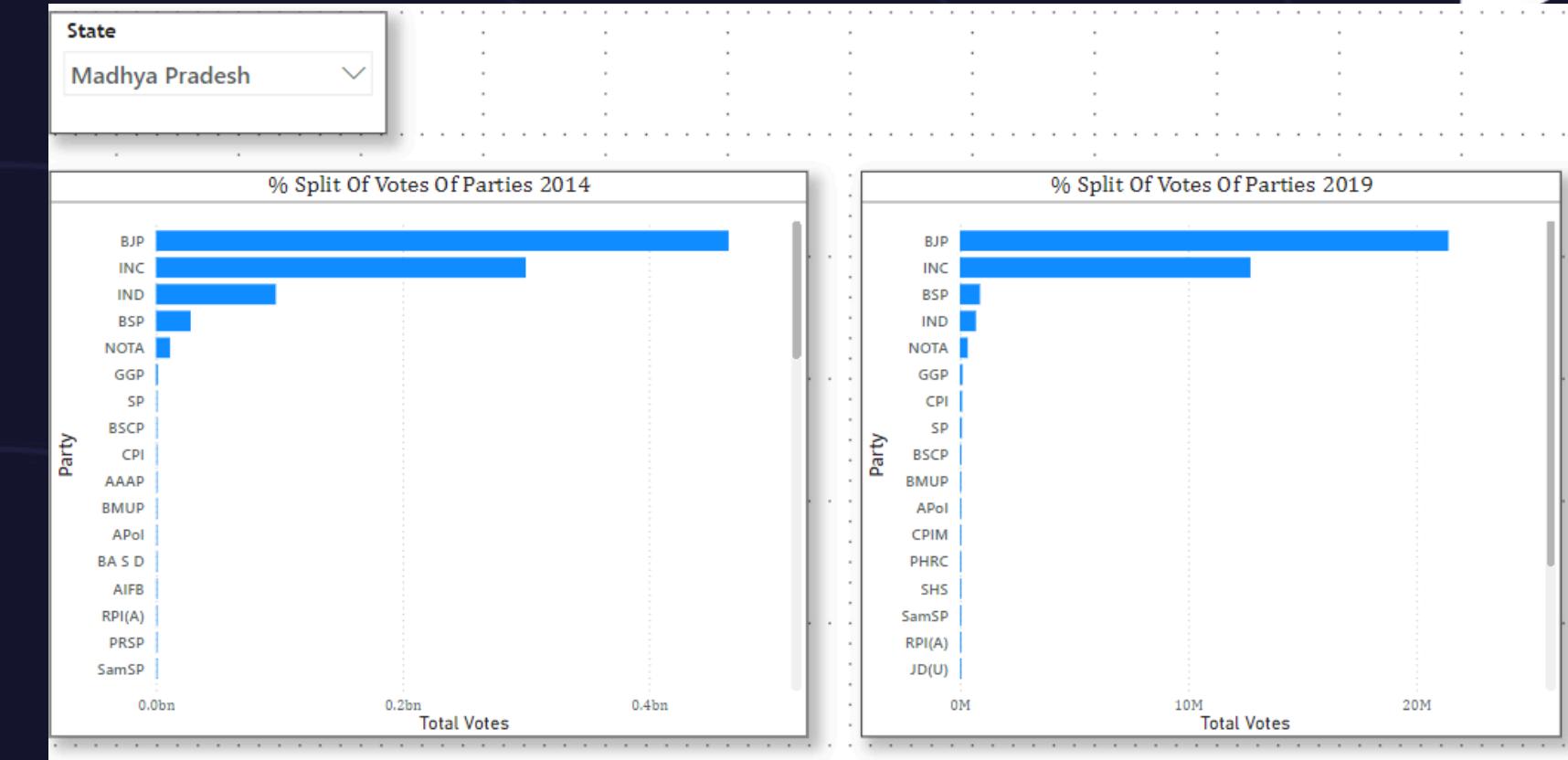
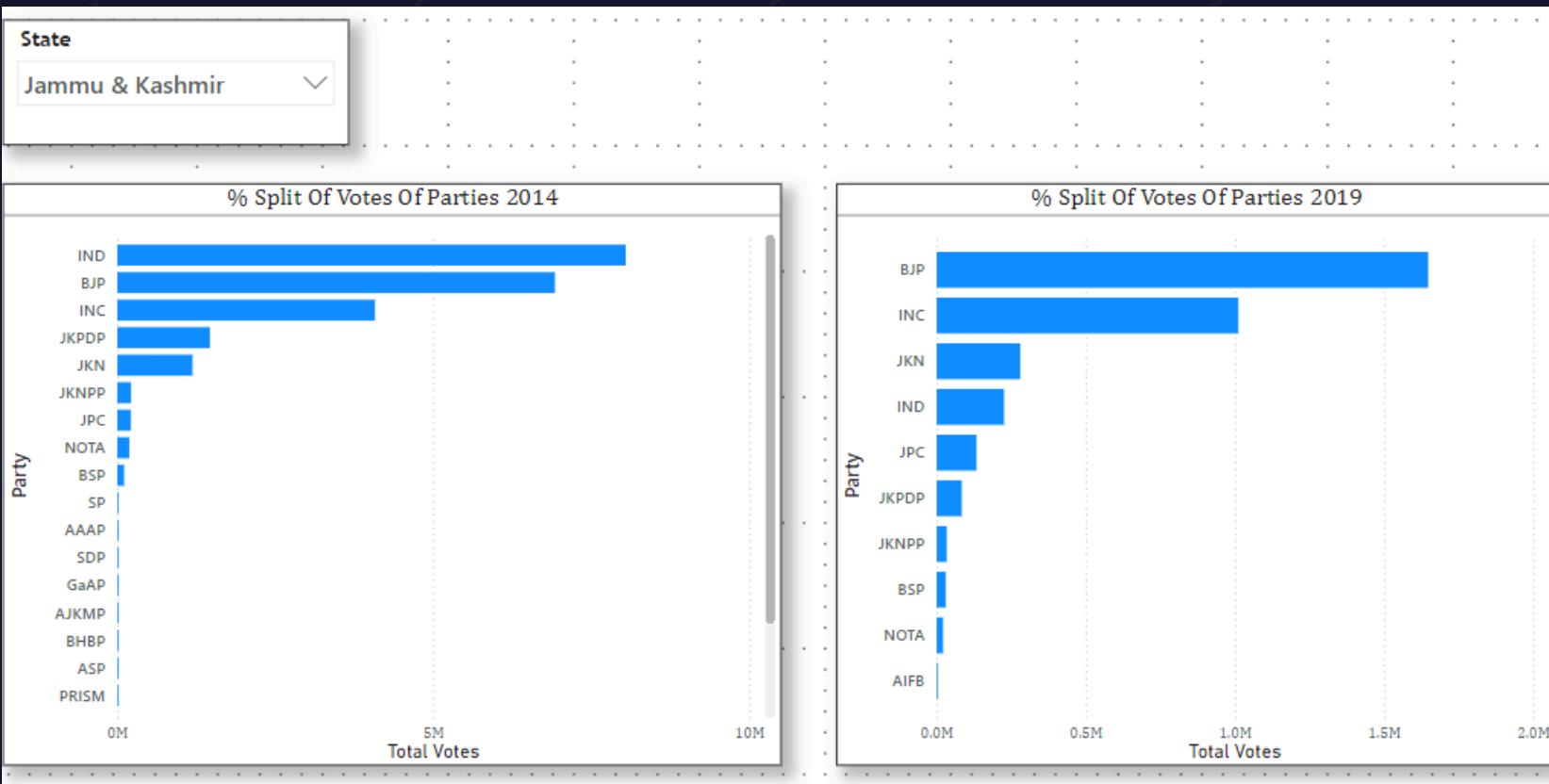
Top 5 candidates based on MoV

Candidate	Constituencies	MoV %
C. R. Patil	Navsari	56.25
Darshan Vikram Jardosh	Surat	50.93
Sanjay Bhatia	Karnal	49.08
Kiren Rijiju	Arunachal West	48.08
Dr. Kalanidhi Veeraswamy	Chennai North	47.18

6. % Split of votes of parties between 2014 & 2019 at national level



7. % Split of votes of parties between 2014 & 2019 at State level



8. List Top 5 constituencies for two major national parties where they have gained vote share in 2019 as compared to 2014



% Gain in vote share



Constituencies	State	% Gain in vote share
Tripura West	Tripura	46.67
Purulia	West Bengal	42.14
Tripura East	Tripura	39.74
Ranaghat	West Bengal	35.51
Jhargram	West Bengal	34.82

Constituencies	State	% Gain in vote share
Kanur	Tamil Nadu	60.15
Tiruchirappalli	Tamil Nadu	54.06
Arani	Tamil Nadu	51.48
Thiruvallur	Tamil Nadu	50.98
Krishnagiri	Tamil Nadu	40.00

9. List Top 5 constituencies for two major national parties where they have lost vote share in 2019 as compared to 2014



% Loss in vote share



Constituencies	State	% Loss in vote share
Narsapuram	Andhra Pradesh	48.56
Visakhapatnam	Andhra Pradesh	45.98
Tirupati	Andhra Pradesh	43.53
Sangli	Maharashtra	15.66
Daman & Diu	Daman & Diu	10.85

Constituencies	State	% Loss in vote share
Dadra & Nagar Haveli	Dadra & Nagar Haveli	40.79
Ratnagiri-sindhudurg	Maharashtra	31.25
Aurangabad	Maharashtra	28.85
Arunachal West	Arunachal Pradesh	23.80
Raiganj	West Bengal	21.95

Things are the best! Click "Like" and start interacting.

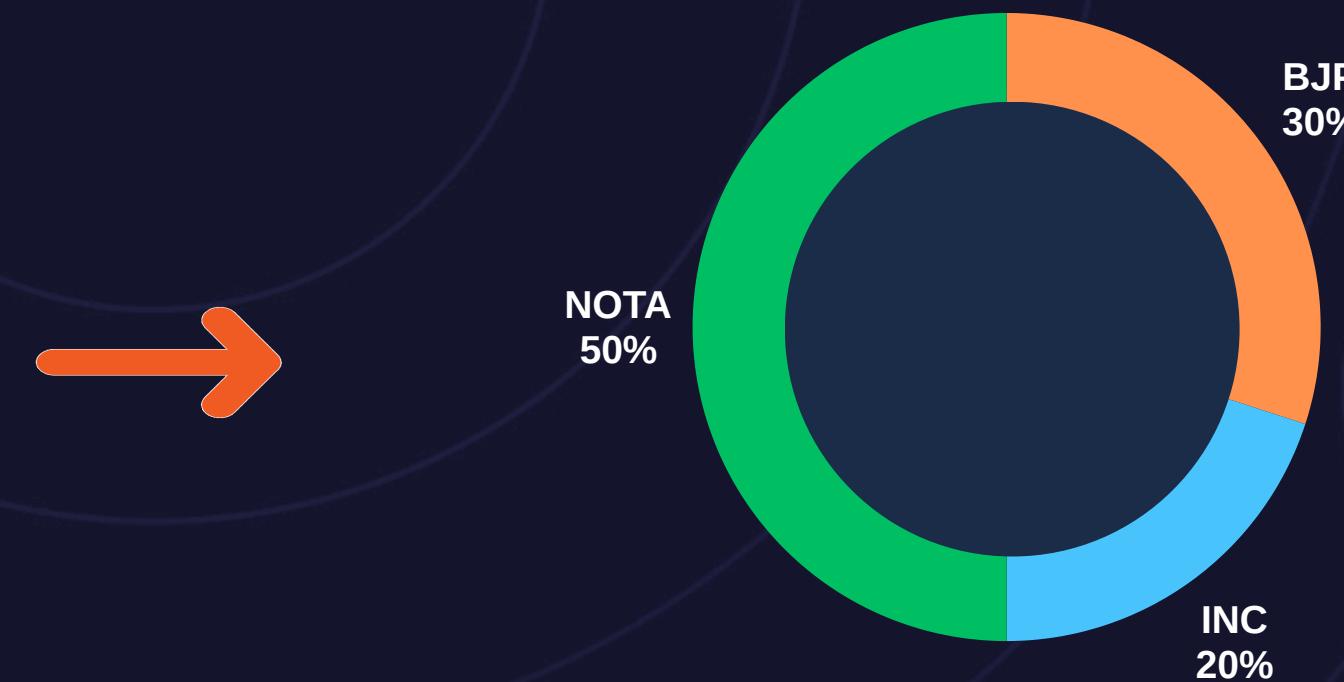


10. Which constituency has voted the most for NOTA ?

NOTA

A "NOTA" vote stands for "None of the Above." It's an option on a ballot that allows voters to indicate that they do not support any of the candidates or choices presented. If you don't like any of the candidates running for office or any of the choices on an issue, you can select NOTA to express your disapproval or dissatisfaction. It's a way for voters to voice that they don't want to choose any of the available options. NOTA votes serve as a way for voters to express their dissatisfaction with the candidates or options available. This can send a message to political parties and candidates that voters are unhappy with their choices.

In most cases, NOTA votes do not directly affect which candidate wins an election. The candidate with the most votes still wins, regardless of how many NOTA votes are cast.





Constituencies with Most NOTA votes

Year	Constituency	State	Number Of Votes	
2014	Nilgiris	Tamil Nadu	46559	
2019	Gopalganj	Bihar	51660	

11. Which constituencies have elected candidates whose party has less than 10% vote share at state level in 2019 ?



To be calculated as :

$$\frac{\text{SUM OF TOTAL VOTES RECEIVED BY THE ELECTED PARTY IN THE STATE}}{\text{TOTAL VOTES POLLED IN THE STATE}}$$



Top 10 constituencies which have elected candidates whose party has less than 10% vote share at state level in 2019

State	Constituency	Winner	Elected Party	% of vote share at state level
Karnataka	Hassan	Prajwal Revanna	JD(S)	 9.67
Punjab	Gurdaspur	Sunny Deol	BJP	 9.63
Punjab	Hoshiarpur	Som Prakash	BJP	 9.63
Jammu & Kashmir	Anantnag	Hasnain Masoodi	JKN	 7.89
Jammu & Kashmir	Baramulla	Md.Akbar Lone	JKN	 7.89
Jammu & Kashmir	Srinagar	Farooq Abdullah	JKN	 7.89
Bihar	Hajipur	Pashupati Ku Paras	LJP	 7.86
Bihar	Jamui	Chirag Paswan	LJP	 7.86
Bihar	Khagaria	Chaoudhury Mehboob Ali Kaiser	LJP	 7.86
Bihar	Nawada	Chandan Singh	LJP	 7.86

Secondary Questions



1. Is there any correlation between Postal vote% and Voter Turnout %?



The maximum value for a correlation coefficient is 1.

Correlation coefficients measure the strength and direction of a linear relationship between two variables. Here's what the values indicate:

+1: PERFECT POSITIVE CORRELATION. THIS MEANS THAT AS ONE VARIABLE INCREASES, THE OTHER VARIABLE ALSO INCREASES IN A PERFECTLY LINEAR FASHION.

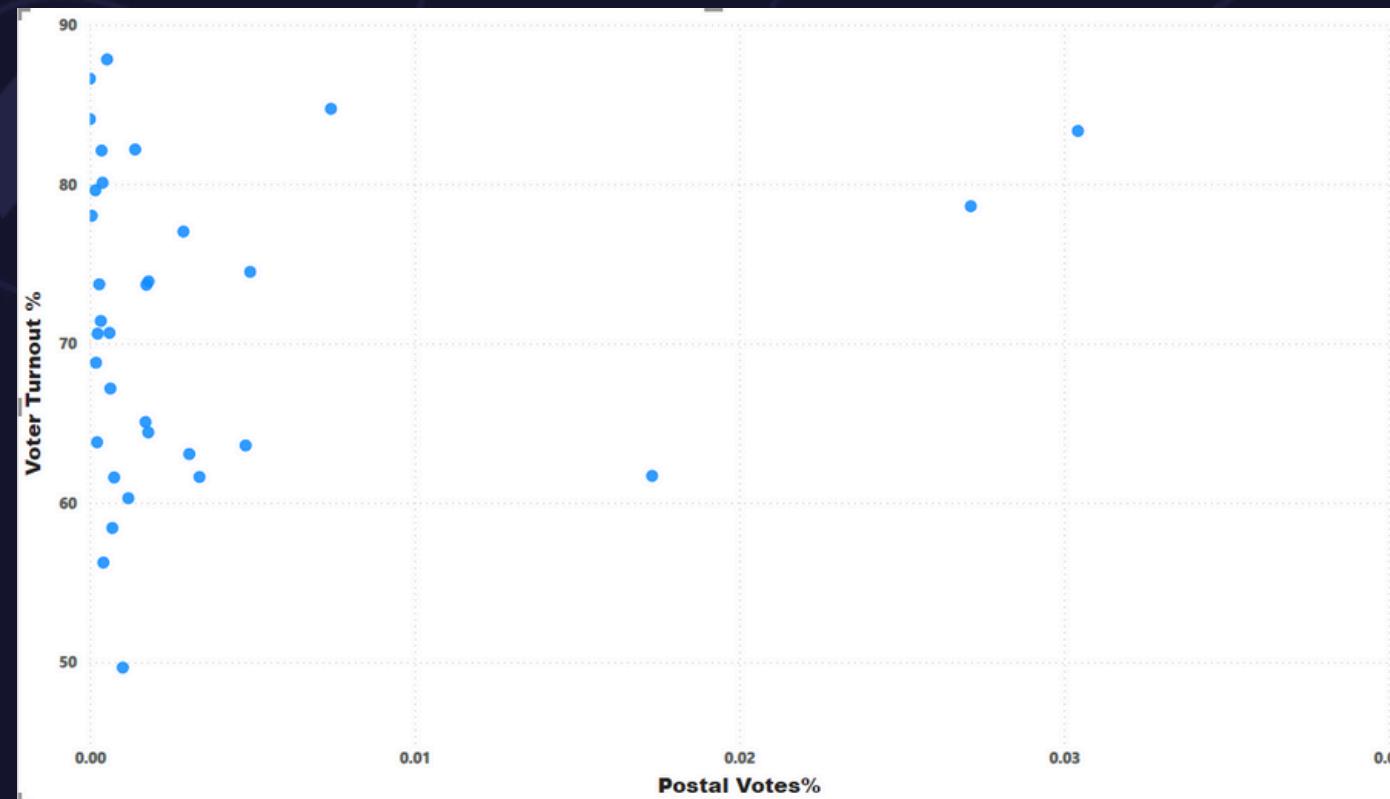
0: NO CORRELATION. THIS MEANS THERE IS NO LINEAR RELATIONSHIP BETWEEN THE TWO VARIABLES.

-1: PERFECT NEGATIVE CORRELATION. THIS MEANS THAT AS ONE VARIABLE INCREASES, THE OTHER VARIABLE DECREASES IN A PERFECTLY LINEAR FASHION.

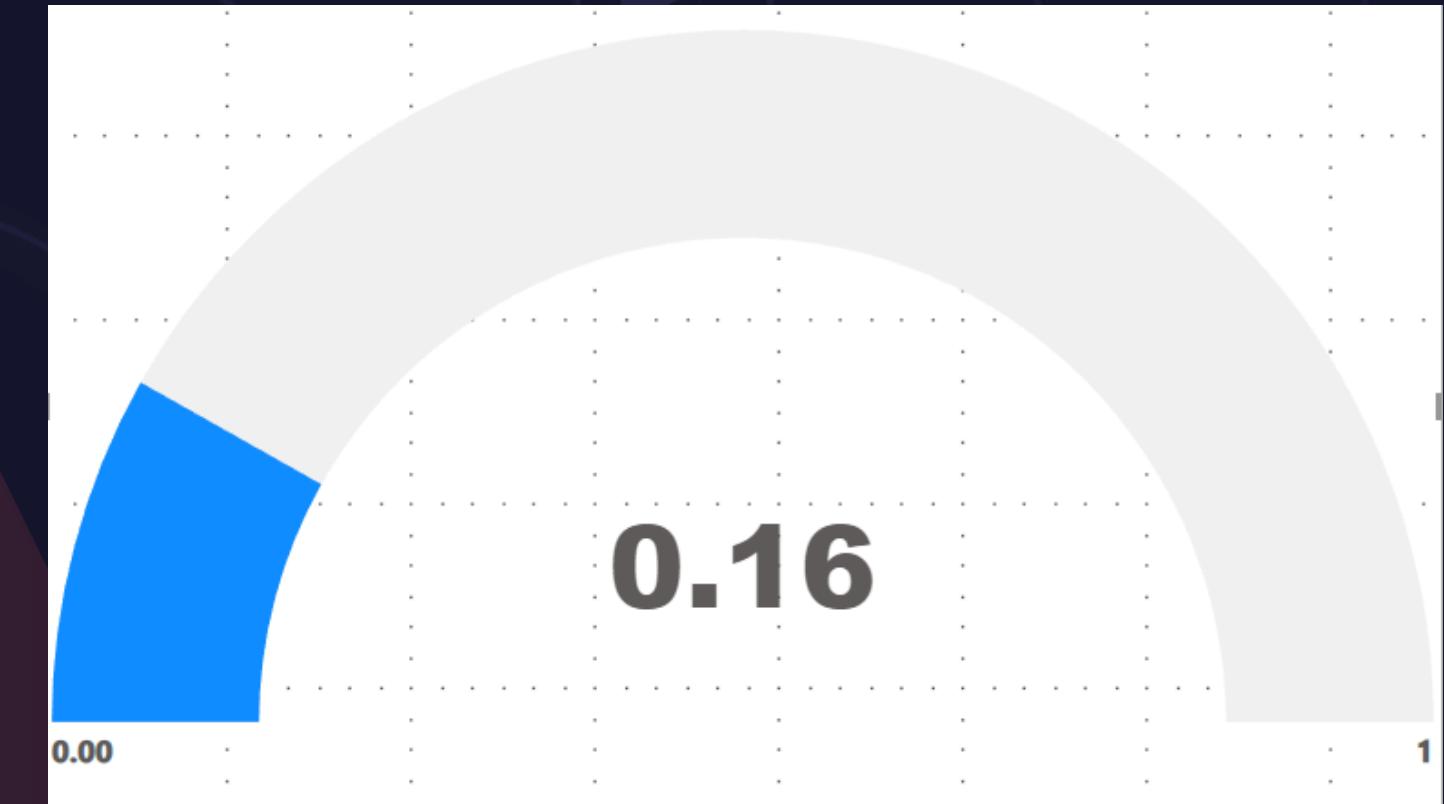
So, the correlation coefficient can range from -1 to 1, with 1 being the maximum value, indicating a perfect positive linear relationship between the two variables.

2014

CORRELATION BETWEEN POSTAL VOTE% & VOTER TURNOUT %



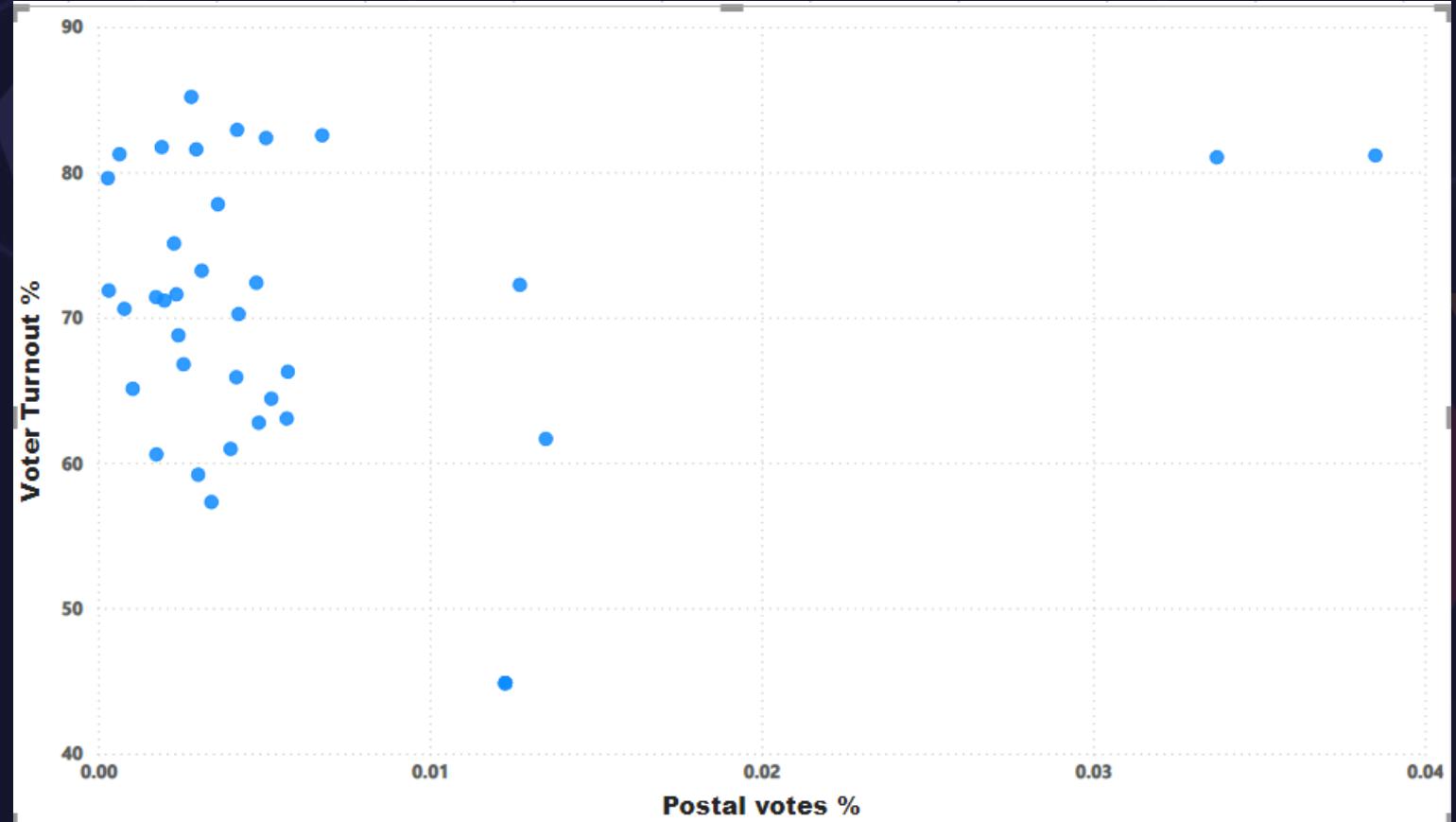
CORRELATION COEFFICIENT



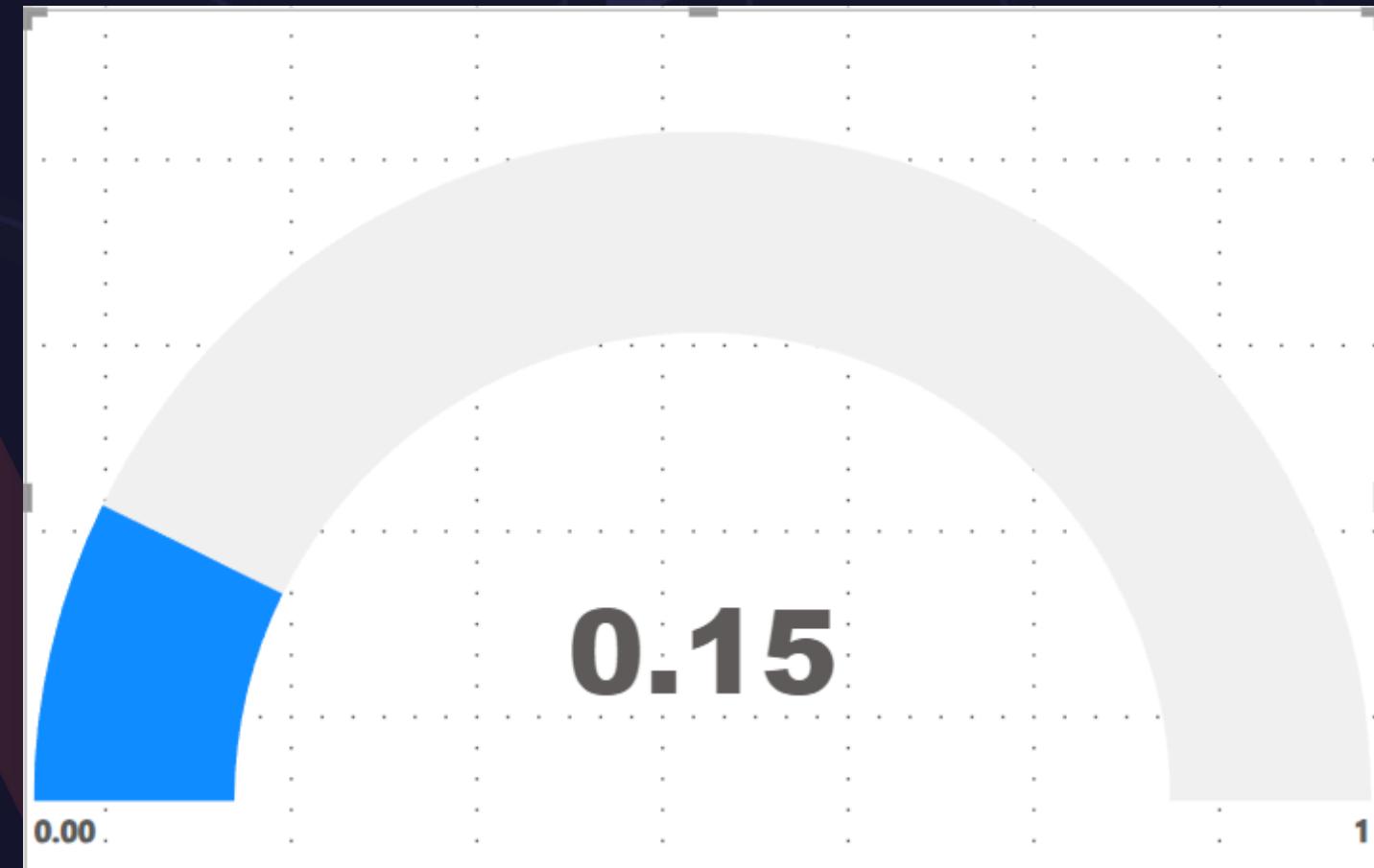
Here in our data we can see there is a weak positive correlation between postal vote % and voter turnout ratio% as the correlation coefficient comes out to be 0.16

2019

CORRELATION BETWEEN POSTAL VOTE% & VOTER TURNOUT %



CORRELATION COEFFICIENT



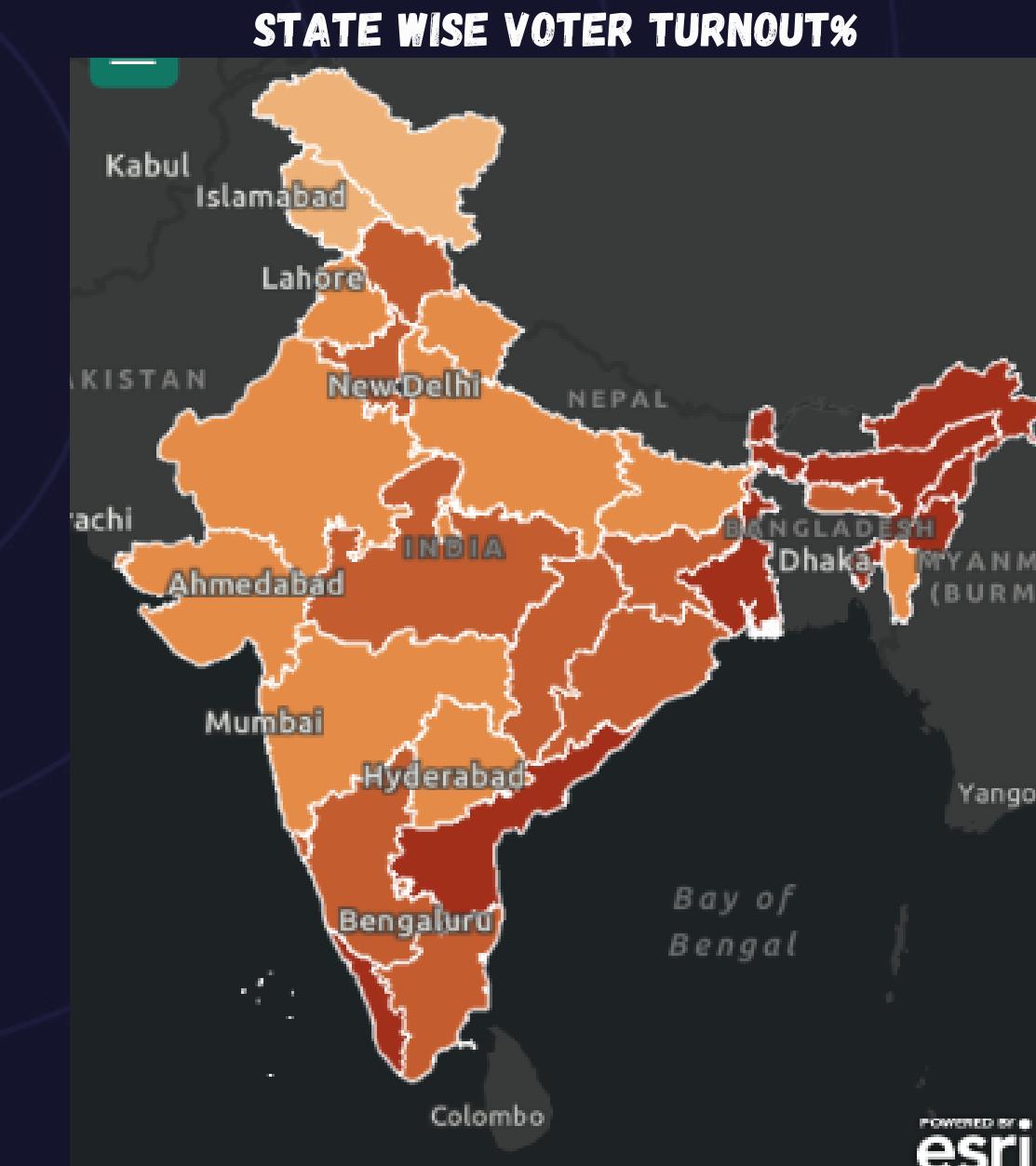
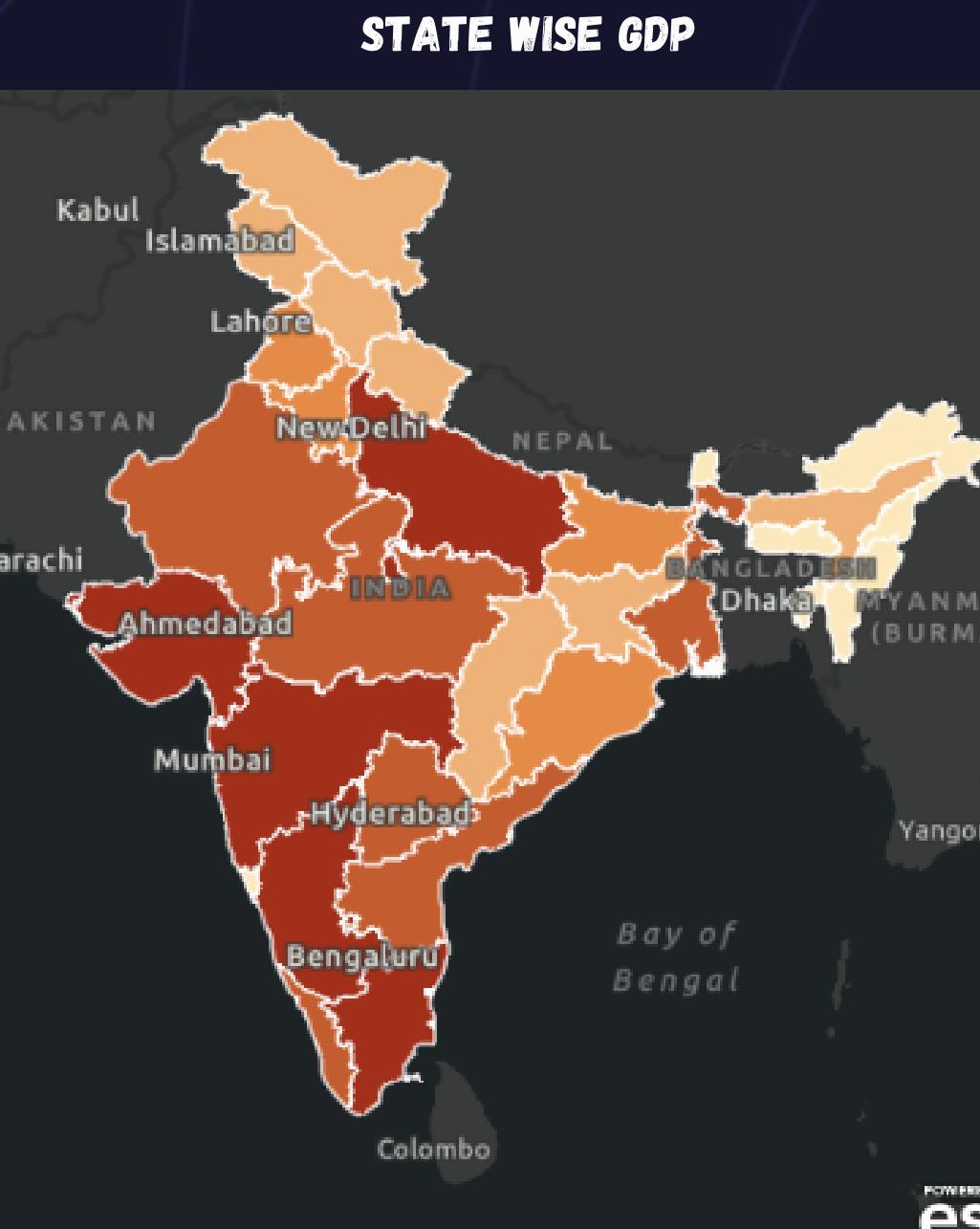
Here in our data we can see there is a weak positive correlation between postal vote % and voter turnout ratio% as the correlation coefficient comes out to be 0.15

2. Is there any correlation between GDP of a state and Voter Turnout %?



The correlation between the GDP of a state and voter turnout percentage is a complex relationship influenced by multiple factors. There isn't a straightforward, universal correlation that applies in all contexts

2019



Although there is no direct relation between GDP of a state and voter turnout %, there are some points to be considered :

Economic Stability and Civic Engagement:

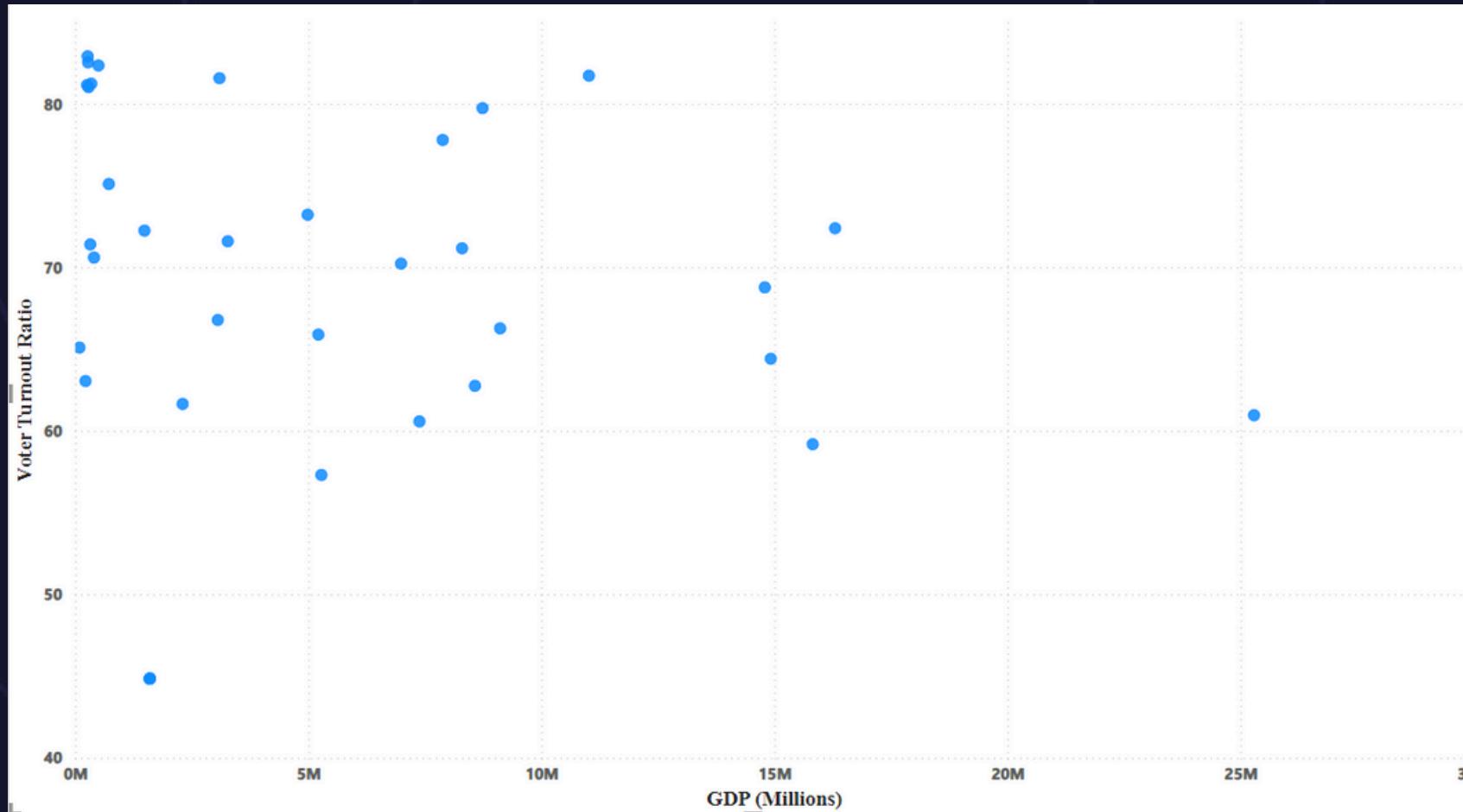
States with higher GDP often have better infrastructure, education systems, and more resources to support civic engagement activities.

This can lead to higher voter turnout as citizens are more informed and have easier access to voting facilities.

Income Inequality:

- Even in states with high GDP, significant income inequality can lead to lower voter turnout among disadvantaged groups. Economic disparities can affect people's ability to participate in elections, especially if they face barriers like transportation issues or inflexible work schedules.

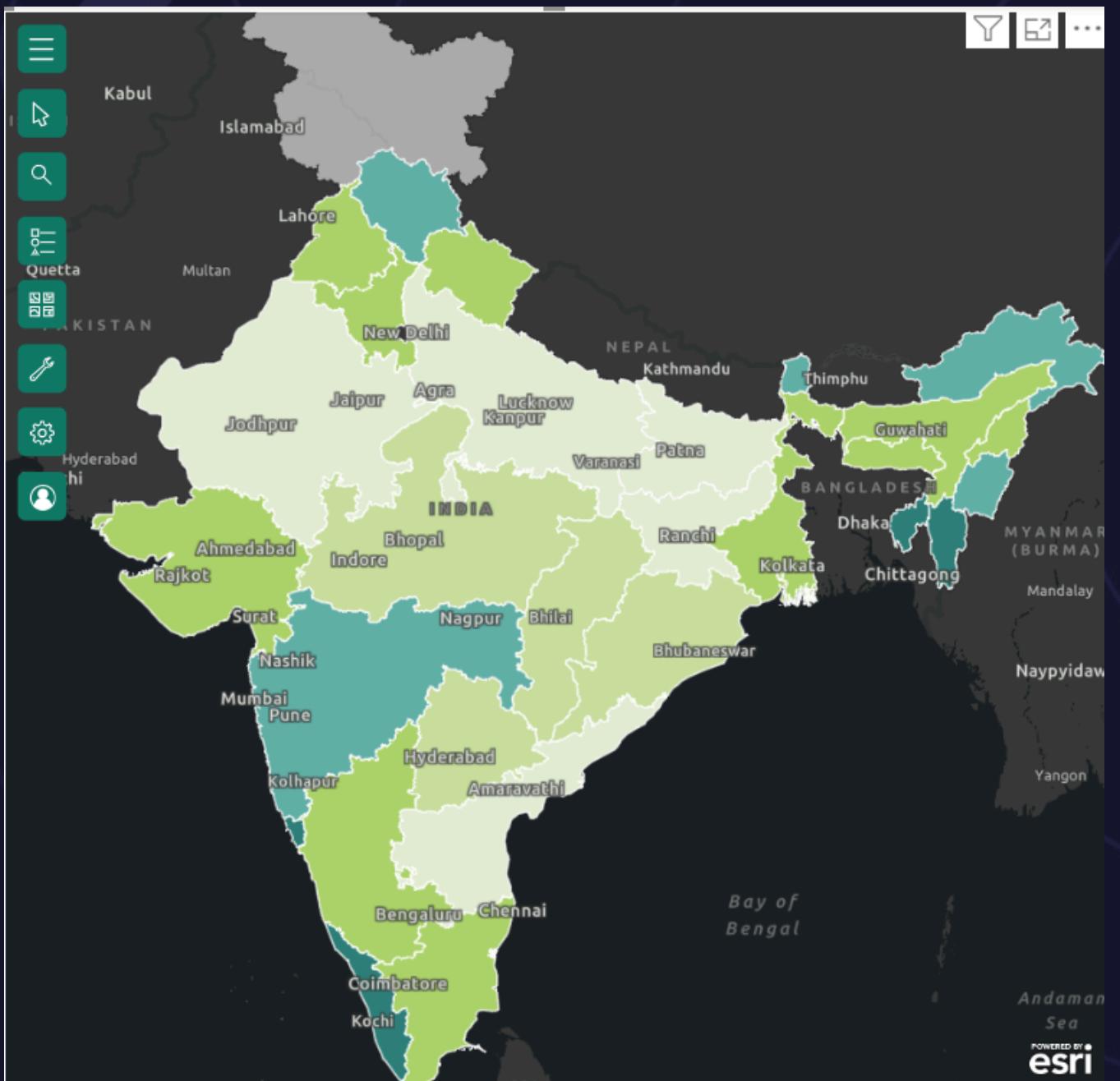
CORRELATION BETWEEN GDP OF A STATE & VOTER TURNOUT %



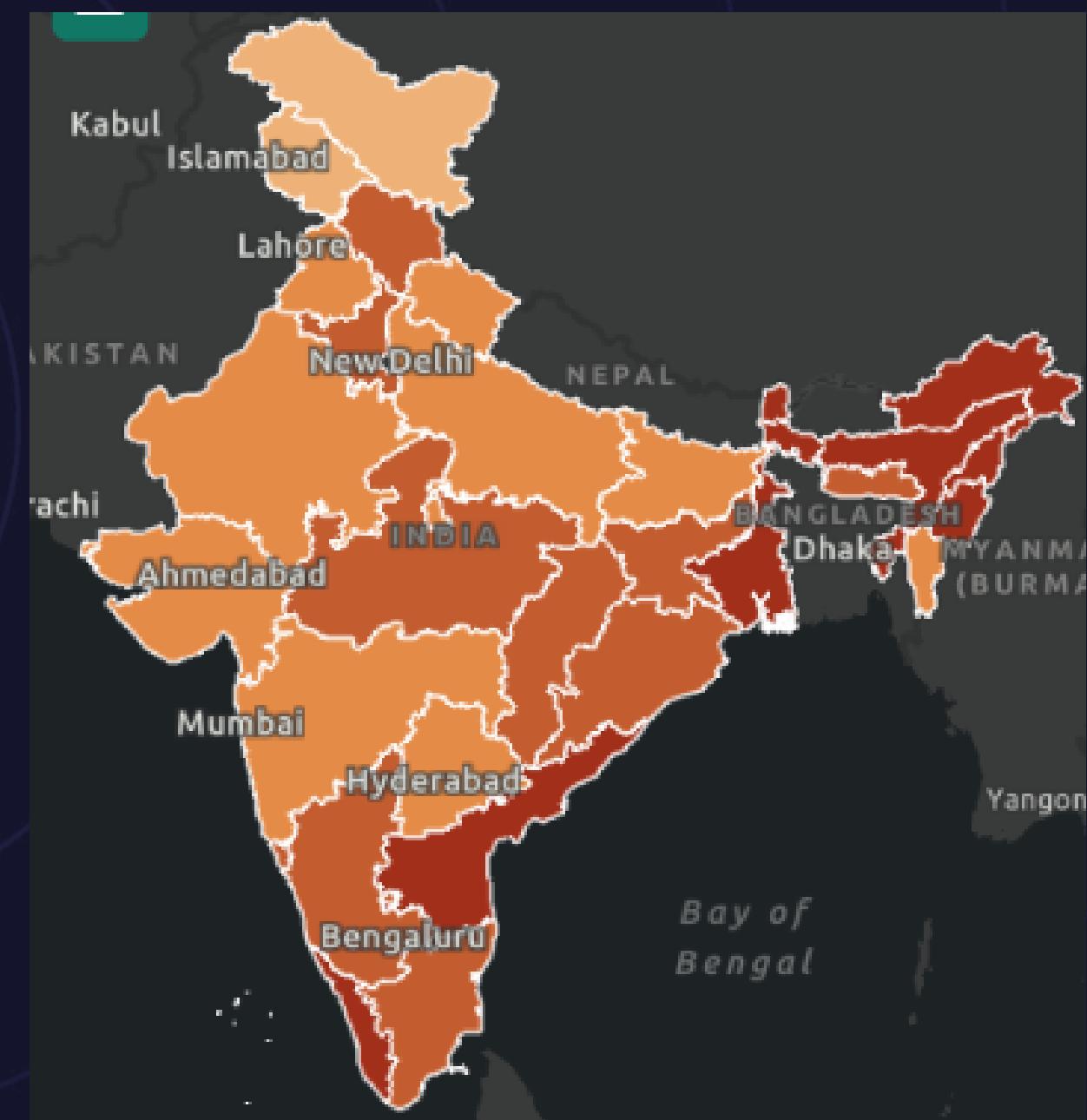
3. Is there any correlation between Literacy% of a state and Voter Turnout %?

2019

STATE WISE LITERACY %



STATE WISE VOTER TURNOUT%



The correlation between the literacy rate of a state and its voter turnout percentage can be complex and influenced by various factors. However, there are some general trends and observations that can be made:

Informed Electorate:

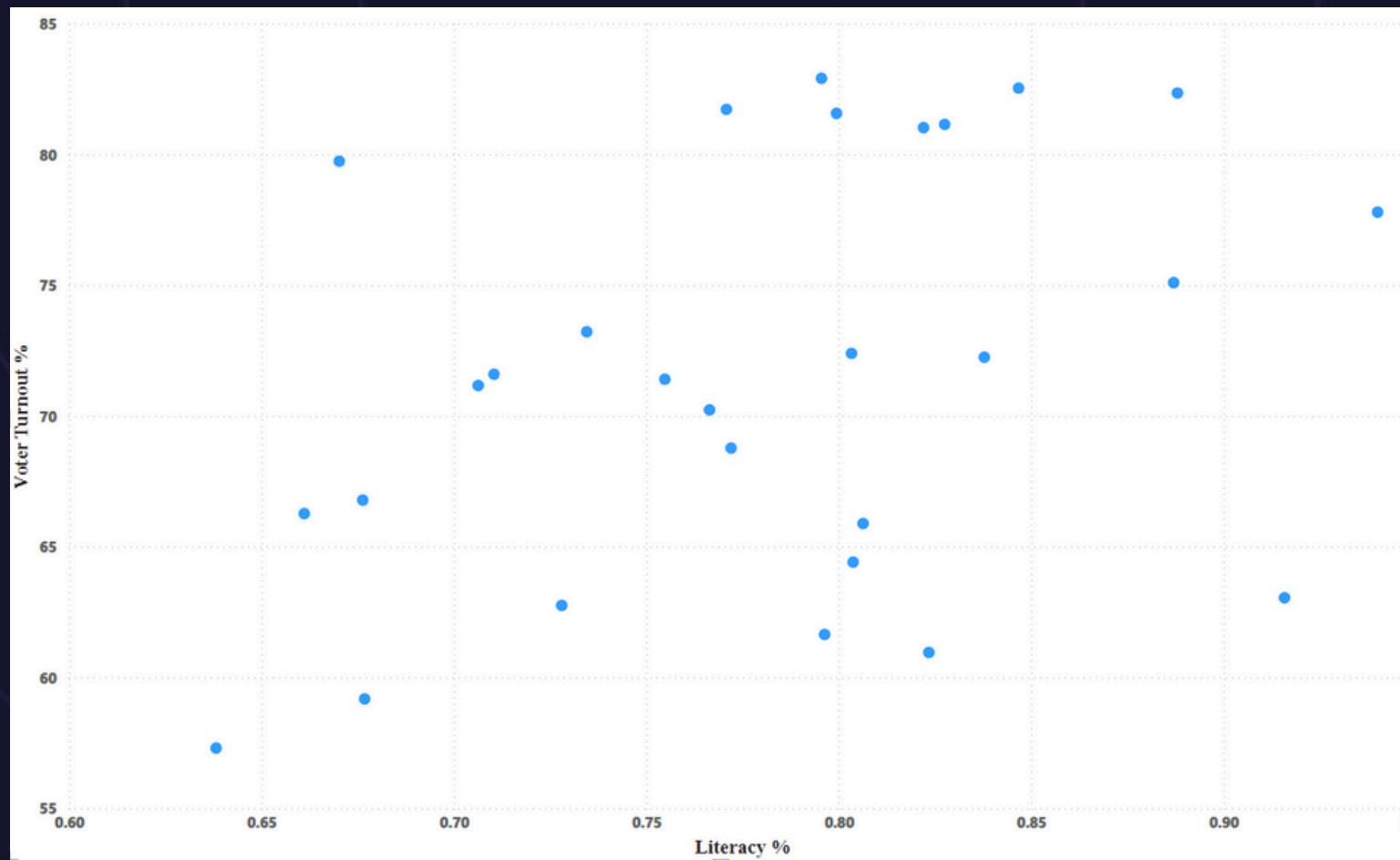
Higher literacy rates generally lead to a more informed electorate. Literate individuals are more likely to understand the importance of voting, be aware of election dates, and comprehend the issues at stake, leading to higher voter turnout.

Access to Information:

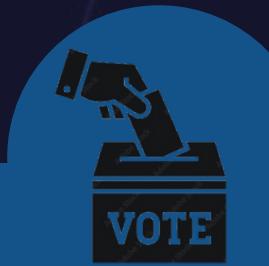
Literate people have better access to information through newspapers, online platforms, and other media, which can motivate them to participate in elections.

2019

CORRELATION BETWEEN LITERACY% & VOTER TURNOUT %



Recommendation to Election Commission/Government of India to increase voter turnout %



Make Voting Easier

Allow voting on weekends and increase the number of days people can vote. This makes it easier for everyone to find a convenient time to vote.

Set up more polling stations so people don't have to travel far or wait in long lines to cast their votes.



Raise Awareness

Use TV, radio, social media, and community events to remind people when and where to vote and explain how important their vote is.

Provide easy-to-understand guides on the voting process and the issues at stake, so people feel more confident about voting.



Use Technology to Help

Allow online registration to make it easier for people to sign up to vote.

Use social media and websites to remind people about upcoming elections and where they can vote.



THANK YOU

Thank you CodeBasics team for organising such premium resume project challenges. I would like to thank Dhaval Sir and Hemanand Sir for their continuous effort and support. Your expertise and encouragement have been invaluable. Your insights have not only helped me improve the quality of my work but have also contributed significantly to my professional growth.



DHAVAL PATEL



HEMANAND VADIVEL



BHAVIN PATEL



CODEBASICS TEAM

**THANK YOU
FOR WATCHING**