

ANALYSIS OF LOK SABHA ELECTION 2024

ELECTION COMMISSION OF INDIA

USING-SQL QUERIES

PROJECT DESCRIPTION

INDIAN GENERAL ELECTION 2024 ANALYSIS

THIS PROJECT PRESENTS A COMPREHENSIVE ANALYSIS OF THE 2024 INDIAN GENERAL ELECTIONS, FOCUSING ON THE DISTRIBUTION OF LOK SABHA SEATS, THE PERFORMANCE OF MAJOR POLITICAL ALLIANCES, AND A DETAILED BREAKDOWN OF VOTING PATTERNS ACROSS STATES AND CONSTITUENCIES. THE ANALYSIS IS DATA-DRIVEN, COVERING KEY ASPECTS SUCH AS WINNING MARGINS, VOTE SHARE, AND PARTY-WISE PERFORMANCE.

OBJECTIVES

- DATA CLEANING & PREPROCESSING: REMOVE DUPLICATES, FIX INCONSISTENCIES, AND STRUCTURE THE DATASET.
- STATE-WISE & NATIONAL INSIGHTS: CALCULATE TOTAL SEATS, VOTE SHARES, AND WINNING PARTIES PER STATE.
- PARTY & ALLIANCE ANALYSIS: DETERMINE WHICH PARTY/ALLIANCE WON THE MOST SEATS ACROSS INDIA.
- CANDIDATE-LEVEL ANALYSIS: IDENTIFY TOP-WINNING CANDIDATES, VOTE MARGINS, AND COMPETITION LEVELS.
- VOTING TRENDS: ANALYZE EVM VS. POSTAL VOTES AND REGIONAL VOTING PATTERNS.

DATA SOURCES

THE PROJECT UTILIZES MULTIPLE DATASETS RELATED TO INDIAN GENERAL ELECTIONS 2024, INCLUDING:

1. STATES.CSV → CONTAINS STATE DETAILS WITH UNIQUE STATE IDs.
2. STATEWISE_RESULTS.CSV → PROVIDES STATE-WISE ELECTION RESULTS.
3. CONSTITUENCYWISE_RESULTS.CSV → STORES CANDIDATE-WISE ELECTION RESULTS PER CONSTITUENCY.
4. PARTYWISE_RESULTS.CSV → SHOWS PARTY-WISE SEAT COUNTS AND VOTE SHARES.
5. CONSTITUENCYWISE_DETAILS.CSV → INCLUDES EVM & POSTAL VOTE DETAILS.

KEY SQL OPERATIONS & QUERIES

TOTAL SEATS PER STATE → COUNTING TOTAL LOK SABHA SEATS PER STATE.

TOTAL VOTES, EVM & POSTAL VOTE ANALYSIS → SUMMING TOTAL VOTES, EVM VOTES, AND POSTAL VOTES.

TOP WINNING PARTY PER STATE → IDENTIFYING WHICH PARTY WON THE MOST SEATS PER STATE.

ALLIANCE-WISE SEAT SHARE → ASSIGNING ALLIANCES (NDA, INDIA) AND CALCULATING TOTAL SEATS WON.

STATE-LEVEL AND NATIONAL-LEVEL INSIGHTS → AGGREGATING RESULTS FOR OVERALL ELECTION PERFORMANCE.

TOTAL NO OF LOK SABHA SEATS IN INDIA

SQL- QUERY

```
select sum(won) as Total_seats from partywise_result
```

RESULT

	total_seats	lock
	bigint	
1		
	543	

FOR EACH CONSTITUENCY, RETRIEVE THE CANDIDATE WHO RECEIVED THE HIGHEST TOTAL VOTES.

SQL- QUERY

```
select constituency_id, candidate, total_votes
from (
  select constituency_id, candidate, total_votes,
  row_number() over (partition by Constituency_id order by Total_Votes desc ) as RN
  from Loksabha) as sub
where RN = 1;
```

RESULT

	constituency_id character varying (10) 	candidate character varying (100)	 total_votes integer 
1	S011	GUMMA THANUJA RANI	477005
2	S0110	PUTTA MAHESH KUMAR	746351
3	S0111	BALASHOWRY VALLABHANENI	724439
4	S0112	KESINENI SIVANATH (CHINNI)	794154
5	S0113	DR CHANDRA SEKHAR PEMMASANI	864948

CACLUATE TOTAL NUMBER OF LOKSABHA SEATS IN EACH STATE

SQL- QUERY

```
select t1.state_name, count(*) from states t1  
join statewise_result t2  
on t1.state_id = t2.state_id  
group by t1.state_name  
order by count(*) desc
```

RESULT

	state_name character varying (50)	count bigint
1	Uttar Pradesh	80
2	Maharashtra	48
3	West Bengal	42
4	Bihar	40
5	Tamil Nadu	39
6	Madhya Pradesh	29

FOR EACH CANDIDATE, CALCULATE THE PERCENTAGE CONTRIBUTION OF EVM VOTES AND POSTAL VOTES TO THEIR TOTAL VOTES.

SQL- QUERY

```
select
    candidate,
    cast((cast(evem_votes as decimal(10,2)) * 100)/ total_votes as decimal(5,2)) as evm_per,
    cast((cast(postal_votes as decimal(10,2))*100)/total_votes as decimal(5,2)) as postal_per from Loksabha
where total_votes > 0
```

RESULT

	candidate character varying (100)	evm_per numeric (5,2)	postal_per numeric (5,2)
1	DR JITENDRA SINGH	99.26	0.74
2	CH LAL SINGH	99.43	0.57
3	GHULAM MOHD SAROORI	99.80	0.20
4	MEHRAJ DIN	99.70	0.30
5	AMIT KUMAR	99.04	0.96
6	MOHD ALI GUJJAR	99.73	0.27

CALCULATE AGGREGATE STATISTICS SUCH AS THE TOTAL VOTES, AVERAGE % OF VOTES, TOTAL EVM VOTES, AND TOTAL POSTAL VOTES BY PARTIES.

SQL- QUERY

```
select party, sum(total_votes) as total_votes,  
sum(evem_votes) as total_evem, sum(postal_votes) as total_postal, avg(percentage_of_votes)  
from Loksabha  
group by party  
order by total_votes desc |
```

RESULT

	party character varying (100)	total_votes bigint	total_evem bigint	total_postal bigint	avg double precision
1	Bharatiya Janata Party	471947870	469226432	2721438	44.182471655328754
2	Indian National Congress	273518128	271821070	1697058	34.78054878048781
3	Samajwadi Party	59098762	58932214	166548	37.96042253521127
4	All India Trinamool Congress	56426786	56202740	224046	40.99583333333344
5	Independent	35688884	35510372	178512	0.41659183673469435

IDENTIFY CONSTITUENCIES WHERE THE WINNING CANDIDATE'S PERCENTAGE OF VOTES IS LESS THAN 50% (IMPLYING A CLOSELY CONTESTED RACE). LIST THE CONSTITUENCY, WINNING CANDIDATE, AND % OF VOTES.

SQL- QUERY

```
select constituency_id , candidate as winnig_candidate,
       (total_votes * 100.0 / total_cons_votes) as vote_per
  from(
    select constituency_id, candidate, total_votes,
           sum(total_votes) over (partition by constituency_id) as total_cons_votes,
           RANK() OVER (PARTITION BY constituency_id ORDER BY total_votes DESC) AS rn
      from Loksabha ) as sub
 where rn = 1 and (total_votes * 100.0 / total_cons_votes) < 50 and total_cons_votes > 0;
```

	constituency_id character varying (10) 	winnig_candidate character varying (100) 	vote_per numeric 
1	S011	GUMMA THANUJA RANI	20.4820751516817024
2	S011	GUMMA THANUJA RANI	20.4820751516817024
3	S0110	PUTTA MAHESH KUMAR	27.0016113755735144
4	S0110	PUTTA MAHESH KUMAR	27.0016113755735144

LIST OF CANDIDATES WHO RECEIVED MORE THAN A SPECIFIED NUMBER OF TOTAL VOTES(E.G 10000) AND HAVE A VOTE PERCENTAGE ABOVE A CERTAIN THRESHOLD (E.G., 30%).

```
select candidate, total_votes,  
       (total_votes * 100.0 / total_cons_votes) as vote_per  
from (  
select candidate, total_votes, sum(total_votes) over (partition by constituency_id) as total_cons_votes  
from Loksabha) as sub  
where total_votes > 100000 and (total_votes * 100.0 / total_cons_votes) > 30
```

	candidate character varying (100)	total_votes integer	vote_per numeric
1	DR CHANDRA SEKHAR PEMMASANI	864948	30.3411532857059671
2	DR CHANDRA SEKHAR PEMMASANI	864948	30.3411532857059671
3	KINJARAPU RAMMOHAN NAIDU	754328	30.5226408650741370
4	KINJARAPU RAMMOHAN NAIDU	754328	30.5226408650741370
5	SRBHARAT MATHUKUMILI	907467	32.7103541497702082
6	SRBHARAT MATHUKUMILI	907467	32.7103541497702082

CALCULATE THE TOTAL NO OF SEATS WIN BY NDA ALLIANCE

```
select sum(won) as NDA_seats from partywise_result
where party in (
'Bharatiya Janata Party - BJP',
'Telugu Desam - TDP',
'Janata Dal (United) - JD(U)',
'Shiv Sena - SHS',
'AJSU Party - AJSUP',
'Apna Dal (Soneylal) - ADAL',
'Asom Gana Parishad - AGP',
'Hindustani Awam Morcha (Secular) - HAMS',
'Janasena Party - JnP',
'Janata Dal (Secular) - JD(S)',
'Lok Janshakti Party(Ram Vilas) - LJPRV',
'Nationalist Congress Party - NCP',
'Rashtriya Lok Dal - RLD',
'Sikkim Krantikari Morcha - SKM'
);
```

RESULT

	nda_seats
	bigint
1	292

WHICH PARTY WON MOST SEATS IN A PARTICULAR STATE AND HOW MANY SEATS DID EACH PARTY WIN

```
select pr.party, count(*) as total_seats from const_result cr
join partywise_result pr
on pr.party_id = cr.party_id
join statewise_result sr
on cr.parl_Cons = sr.parl_Cons
join states st
on sr.state_id = st.state_id
where st.state_name = 'Uttar Pradesh'
group by pr.party
order by total_seats desc;
```

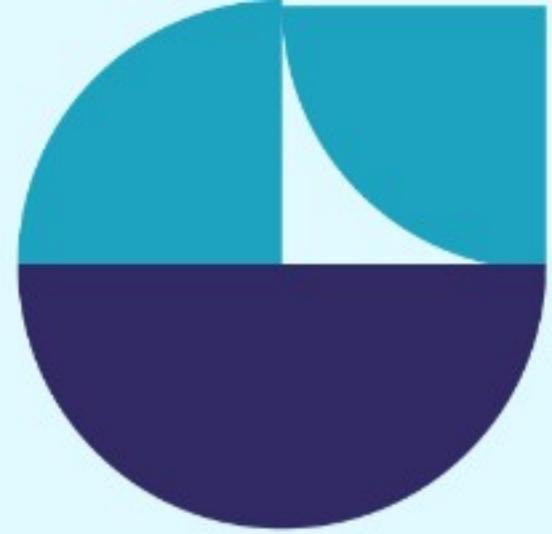
	party character varying (100)	total_seats bigint
1	Samajwadi Party - SP	37
2	Bharatiya Janata Party - BJP	33
3	Indian National Congress - INC	6
4	Rashtriya Lok Dal - RLD	2
5	Aazad Samaj Party (Kanshi Ram) - ASPKR	1
6	Apna Dal (Soneylal) - ADAL	1

TOTAL NUMBER OF LOKSABHA SEATS WON BY NDA ALLIANCE CORRESPONDING TO EACH STATES

```
select st.state_name, count(*) from statewise_result sr
join states st
on sr.state_id = st.state_id
join const_result cr
on sr.parl_cons = cr.parl_cons
join partywise_result pr
on cr.party_id = pr.party_id
where party in (
'Bharatiya Janata Party - BJP',
'Janata Dal (Secular) - JD(S)',
'Janata Dal (United) - JD(U)',
'Nationalist Congress Party - NCP',
'Rashtriya Lok Dal - RLD',
'Shiv Sena - SHS',
'Sikkim Krantikari Morcha - SKM',
'Telugu Desam - TDP',
'AJSU PArt - AJSUP',
'Apna Dal (Soneylal) - ADAL',
'Asom Gana Parishad - AGP',
'Hindustan Awam Morcha (Secular) - HAMS',
'Jansena Party - JnP',
'Lok Janshakti Party(Ram Vilas) - LJPRV'
)
group by st.state_name
order by count(*) desc;
```

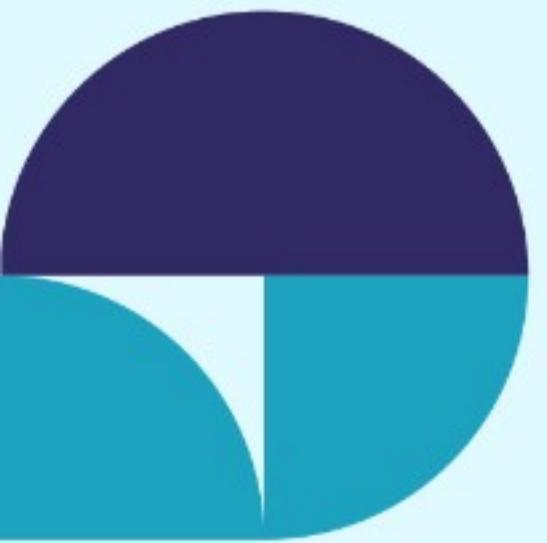
	state_name character varying (50)	count bigint
1	Uttar Pradesh	36
2	Madhya Pradesh	29
3	Bihar	29
4	Gujarat	25
5	Odisha	20
6	Andhra Pradesh	19
7	Karnataka	19
8	Maharashtra	17
9	Rajasthan	14

FOR STATE OF UTTAR PRADESH WHAT ARE THE TOTAL NO OF SEATS, TOTAL NUMBER OF CANDIDATE ,TOTAL NO OF PARTIES, TOTAL VOTES AND THE BREAKDOWN OF EVM AND POSTAL VOTES



```
select * from const_result
select st.state_name,
count(distinct sr.parl_cons) as total_seats,
count(distinct cr.constituency_id) as total_candidate,
count(distinct cr.party_id) as total_parties,
sum(lk.total_votes) as total_votes,
sum(lk.evm_votes) as evm_votes,
sum(lk.postal_votes) as postal_votes
from statewise_result sr
join states st
on sr.state_id = st.state_id
join const_result cr
on sr.parl_cons = cr.parl_cons
join Loksabha lk
on cr.constituency_id = lk.constituency_id
where st.state_name = 'Uttar Pradesh'
group by st.state_name;
```

	state_name character varying (50)	total_seats bigint	total_candidate bigint	total_parties bigint	total_votes bigint	evm_votes bigint	postal_votes bigint
1	Uttar Pradesh	80	80	6	175823284	175350268	473016



WINNING CANDIDATE NAME THEIR PARTY NAME, MARGIN BY WHICH THEY WON FOR A CONSTITUENCY AND FOR STATE SPECIFIC

```
select cr.winning_candidate, pr.party, cr.mrgin, cr.constituency_name, st.state_name  
from const_result cr  
join partywise_result pr  
on cr.party_id = pr.party_id  
join statewise_result sr  
on cr.parl_cons = sr.parl_cons  
join states st  
on sr.state_id = st.state_id  
where st.state_name = 'Uttar Pradesh'  
order by cr.mrgin;
```

	winning_candidate character varying (100)	party character varying (100)	mrgin integer	constituency_name character varying (100)	state_name character varying (50)
1	AJENDRA SINGH LODHI	Samajwadi Party - SP	2629	HAMIRPUR	Uttar Pradesh
2	MUKESH RAJPUT	Bharatiya Janata Party - BJP	2678	FARRUKHABAD	Uttar Pradesh
3	KAMLESH PASWAN	Bharatiya Janata Party - BJP	3150	BANSGAON	Uttar Pradesh
4	RAMASHANKAR RAJBHAR	Samajwadi Party - SP	3573	SALEMPUR	Uttar Pradesh
5	PRAVEEN PATEL	Bharatiya Janata Party - BJP	4332	PHULPUR	Uttar Pradesh

WHAT IS THE DISTRIBUTION OF EVM VOTES VERSUS POSTAL VOTES FOR A CANDIDATE WITH DIFFERENT PARTIES IN SPECIFIC CONSTITUENCY

```
select lk.evm_votes, lk.postal_votes, lk.candidate from const_result cr
join Loksabha as lk
on cr.constituency_id = lk.constituency_id
where cr.constituency_name = 'BASTI'
order by evm_votes desc
```

	evm_votes integer	postal_votes integer	candidate character varying (100)
1	523487	3518	RAM PRASAD CHAUDHARY
2	523487	3518	RAM PRASAD CHAUDHARY
3	424604	1407	HARISH CHANDRA ALIAS HARISH DWIVEDI

**WE ADD EXTRA COLUMN IN PARTWISE_RESULT NAME
PARTY_ALLIANCE AND CALCULATE WHICH PARTY ALLIANCE WON
THE MOST SEATS ACROSS ALL STATES IN DESCENDING ORDER**

```
select pr.party_alliance ,count(cr.constituency_id) as seat_won
from const_result cr
join partywise_result pr
on cr.party_id = pr.party_id
where pr.party_alliance in ('NDA','I.N.D.I.A', 'OTHER')
group by pr.party_alliance
order by seat_won desc;
```

	party_alliance character varying (50)	seat_won bigint
1	NDA	292
2	I.N.D.I.A	234
3	OTHER	17

FOR EACH PARTY, DETERMINE IN HOW MANY CONSTITUENCIES THEIR CANDIDATE WAS THE WINNER

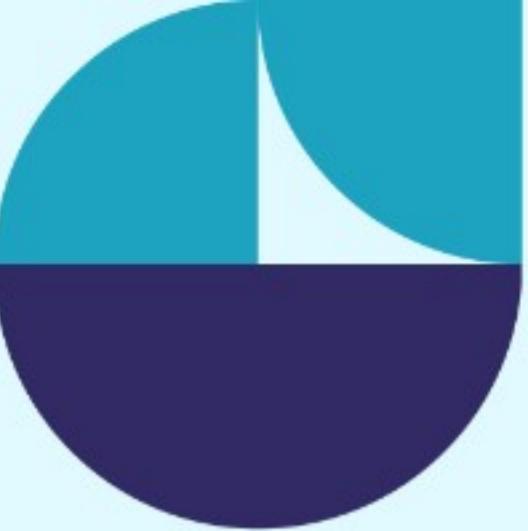
```
select party, count(*) as total_cons_win
from (
    select constituency_id, party, total_votes,
    row_number() over(partition by constituency_id order by total_votes desc) as RN
from Loksabha) as sub
where RN = 1
group by party
order by total_cons_win desc;
```

	party character varying (100)	total_cons_win bigint
1	Bharatiya Janata Party	240
2	Indian National Congress	99
3	Samajwadi Party	37
4	All India Trinamool Congress	29
5	Dravida Munnetra Kazhagam	22
6	Telugu Desam	16
7	Janata Dal (United)	12

CALCULATE THE DIFFERENCE BETWEEN EVM VOTES AND POSTAL VOTES FOR EACH CANDIDATE. THEN, IDENTIFY CANDIDATES WHOSE DIFFERENCE IS SIGNIFICANTLY HIGHER OR LOWER THAN THE OVERALL AVERAGE DIFFERENCE ACROSS ALL CANDIDATES.

```
SELECT
candidate,
(evem_votes - postal_votes) AS vote_diff
FROM Loksabha
WHERE (evem_votes - postal_votes) > (
    SELECT AVG(evem_votes - postal_votes) + 2 * STDDEV(evem_votes - postal_votes)
    FROM Loksabha
)
OR (evem_votes - postal_votes) < (
    SELECT AVG(evem_votes - postal_votes) - 2 * STDDEV(evem_votes - postal_votes)
    FROM Loksabha);
```

	candidate character varying (100)	vote_diff integer
1	DR JITENDRA SINGH	562590
2	CH LAL SINGH	441599
3	CHAMALA KIRAN KUMAR REDDY	618381
4	AMBICA G LAKSHMINARAYANA VALMIKI	743479
5	MALAGUNDLA SANKAR NARAYANA	567848



CONCLUSION

THIS PROJECT SUCCESSFULLY ANALYZED THE INDIAN GENERAL ELECTION 2024 RESULTS USING SQL-BASED DATA PROCESSING AND ANALYSIS. THROUGH EFFICIENT DATA CLEANING, PREPROCESSING, AND QUERYING, WE EXTRACTED VALUABLE INSIGHTS INTO THE PERFORMANCE OF POLITICAL PARTIES, ALLIANCES, AND VOTING TRENDS ACROSS STATES.

THANK YOU

ASHWANI KUMAR

