

Project Development

Project Development Template (Data Connectivity, Data Preparation, Dashboard, Story)

Date	11 February 2026
Team ID	LTVIP2026TMIDS80901
Project Name	Plugging in to the future : An exploration of electricity consumption patterns

Preprocessing Steps Performed On Dataset :

1. Data Cleaning :

- Removed duplicate values
- Removed Inconsistent or missing values

Example :

Duplicate values of same household and date were removed

2. Column Renaming :

- Renamed column headers to meaningful names

Example :

Column "dt" was renamed to "Date".

3. Data Type Conversion :

- Converted Date column to proper Date format
- Converted Consumption column to Number (Measure)
- Converted State and Region fields to categorical (dimension) data types to support grouping and filtering.

Example :

State field converted to Dimension for region-wise grouping

4. Created Parameters :

- Parameters were created to allow dynamic control of dashboard views and user interaction.
- Top N
- Bottom N

5. Filtering Irrelevant Data :

- Removed unnecessary columns not used for analysis

- Filtered out invalid or zero consumption values

Example :

Columns unrelated to analysis were removed to simplify the dataset.

6. Created Calculation Fields :

- Created Calculation Field for Quarter
- Created Calculation Field for Total Usage

Proofs for few preprocessing steps :

Here the image shows that I removed unwanted columns then I load the dataset in to tableau and also I changed the data types of region and states

Tableau - final project - Tableau license expires in 5 days

File Data Server Window Help

Connections Add

VAISHU\SQLEXPRESS
Microsoft SQL Server

Database
tabDB

Table
Consumption
New Custom SQL
New Union
New Table Extension

Consumption (tabDB)

Connection
Live Extract

Filters
0 Add

Consumption

Consumption 8 fields 16599 rows

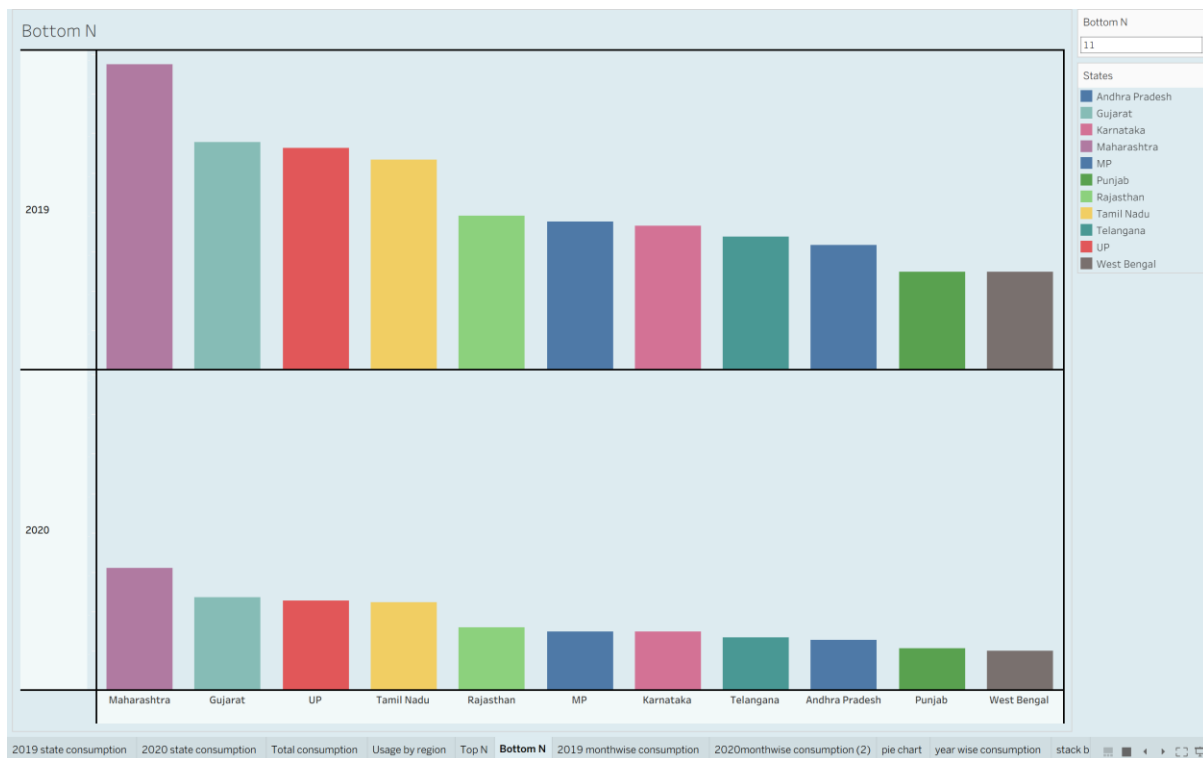
100 rows

Consumption	Consumption	Consumption	Consumption	Consumption	Consumption	Consumption	Consumption
States	Regions	Latitude	Longitude	Dates	Usage	Total usage	Quarter
Punjab	NR	31.5200	75.9800	02-01-2019	119.900	119.900	01-01-2019 00:00:00
Haryana	NR	28.4500	77.0200	02-01-2019	130.300	130.300	01-01-2019 00:00:00
Rajasthan	NR	26.4500	74.6400	02-01-2019	234.100	234.100	01-01-2019 00:00:00
Delhi	NR	28.6700	77.2300	02-01-2019	85.800	85.800	01-01-2019 00:00:00
UP	NR	27.6000	78.0500	02-01-2019	313.900	313.900	01-01-2019 00:00:00
Uttarakhand	NR	30.3204	78.0500	02-01-2019	40.700	40.700	01-01-2019 00:00:00
HP	NR	31.1000	77.1666	02-01-2019	30.000	30.000	01-01-2019 00:00:00

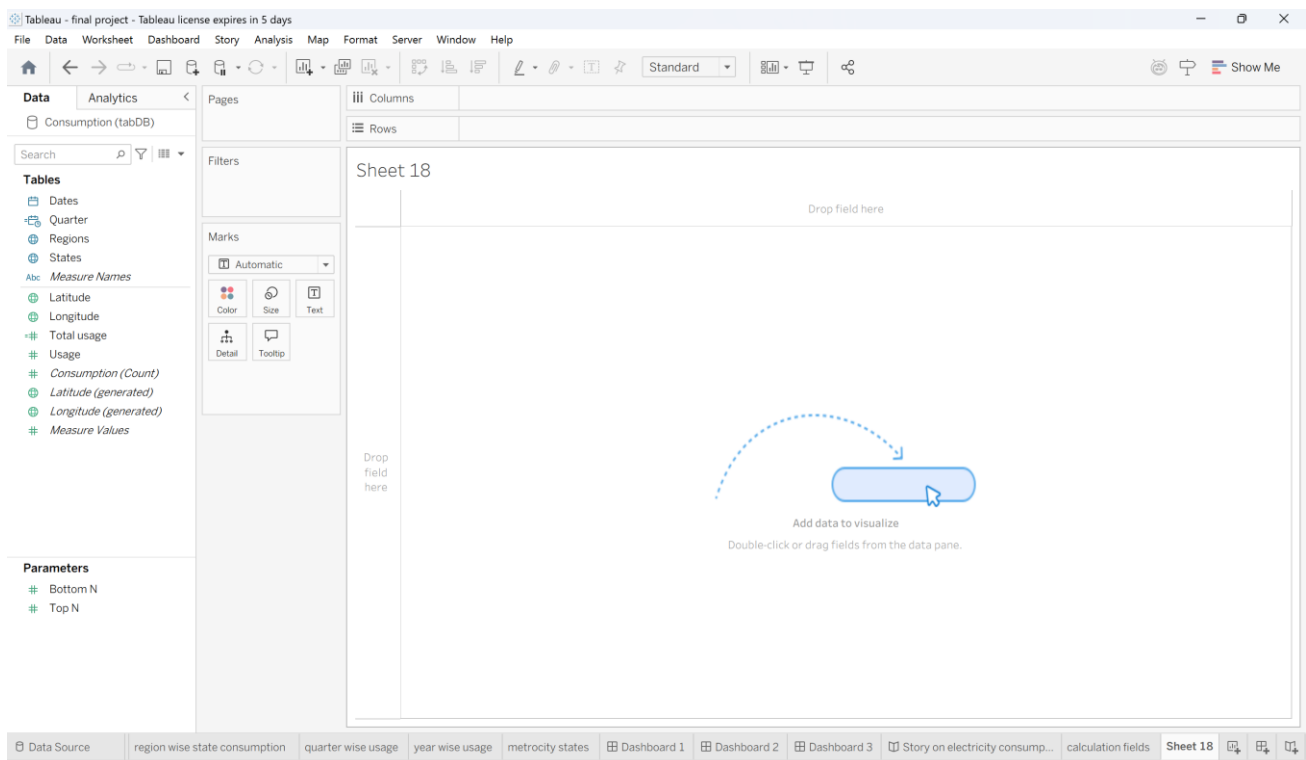
Data Source

2019 state consumption 2020 state consumption Total consumption Usage by region Top N Bottom N 2019 monthwise consumption 2020 monthwise consumption (2) pie chart year wise consumption

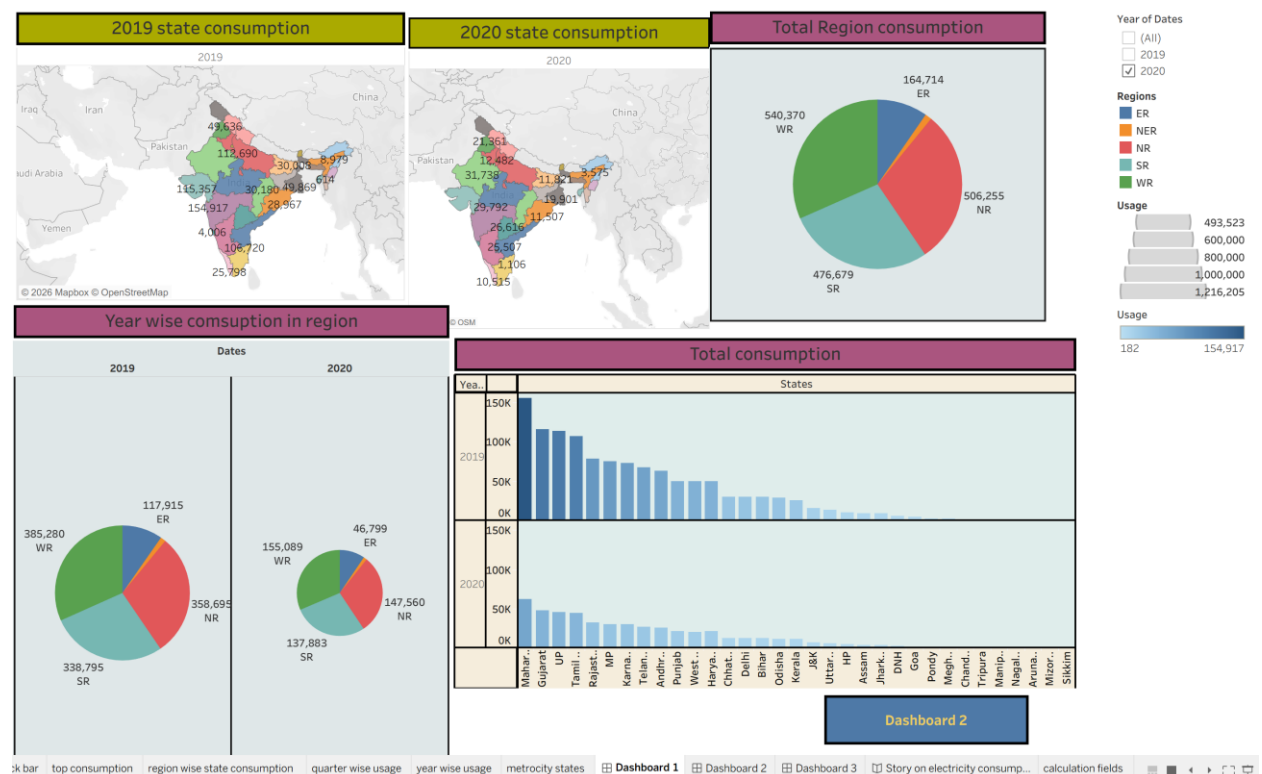
The below image shows parameter which one I used in my project i.e Bottom N



The below image shows that calculation fields in left side of the worksheet

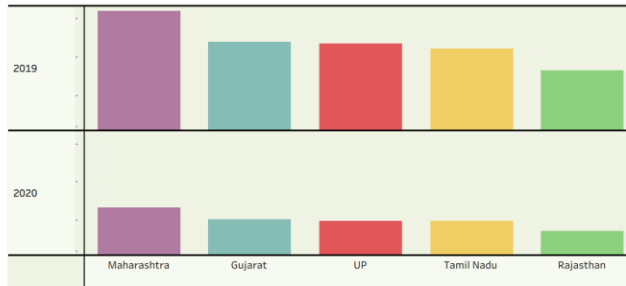


Dashboard Implementation :

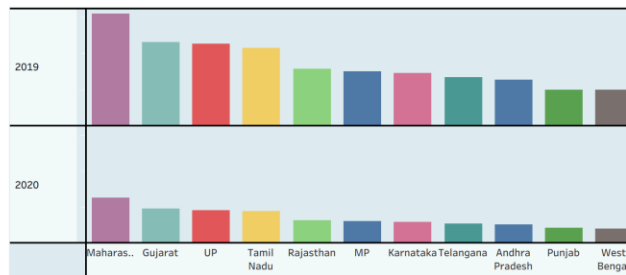


Region wise state consumption			
ER	Sikkim	466	182
	Jharkhand	8,605	3,387
	Odisha	28,967	11,507
	Bihar	30,008	11,821
	West Bengal	49,869	19,901
NER	Mizoram	614	244
	Arunachal Pr.	754	307
	Nagaland	777	311
	Manipur	895	360
	Tripura	1,483	572
NR	Meghalaya	2,018	821
	Assam	8,979	3,575
	Chandigarh	1,472	611
	HP	9,491	3,873
	Uttarakhand	12,899	5,288
SR	J&K	15,915	6,350
	Delhi	29,458	12,482
	Haryana	48,995	20,587
	Punjab	49,636	21,361
	Rajasthan	78,139	31,738
WR	UP	112,690	45,270
	Pondy	2,653	1,106
	Kerala	25,798	10,515
	Andhra Prad.	63,097	25,507
	Telangana	67,450	26,616
WR	Karnataka	73,077	29,589
	Tamil Nadu	106,720	44,551
	Goa	4,006	1,573
	DNH	5,845	2,419
	Chhattisgarh	30,180	12,010
WR	MP	74,975	29,792
	Gujarat	115,357	47,131
	Maharashtra	154,917	62,163

Top N



Bottom N



States

- Andhra Pradesh
- Arunachal Pradesh
- Assam
- Bihar
- Chandigarh
- Chhattisgarh
- Delhi
- DNH
- Goa
- Gujarat
- Haryana
- HP
- J&K
- Jharkhand
- Karnataka
- Kerala
- Maharashtra
- Manipur
- Meghalaya
- Mizoram
- MP
- Nagaland
- Odisha
- Pondy
- Punjab
- Rajasthan
- Sikkim
- Tamil Nadu
- Telangana
- Tripura
- UP
- Uttarakhand
- West Bengal

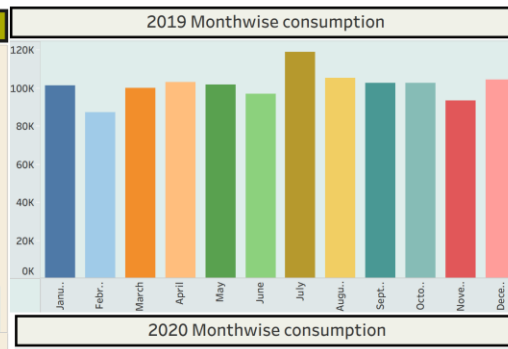
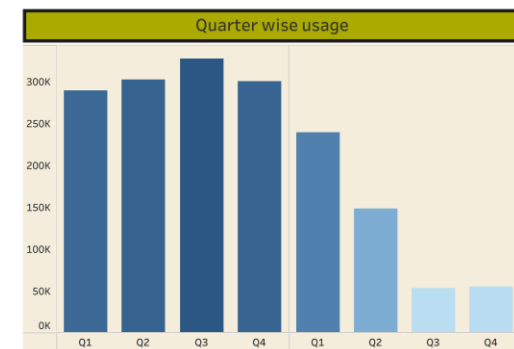
Top N
5

Bottom N
11

Dashboard 1

Dashboard 3

Home bar top consumption region wise state consumption quarter wise usage year wise usage metrocity states Dashboard 1 Dashboard 2 Dashboard 3 Story on electricity consumption calculation fields



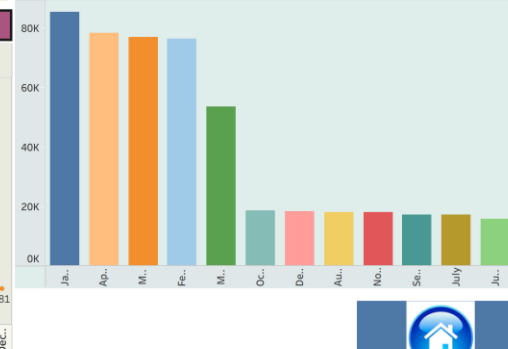
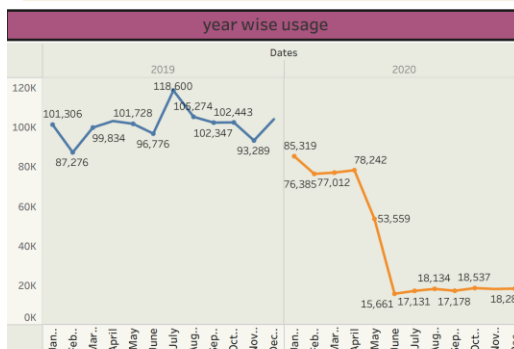
Usage
52,444 326,221

Year of Dates
2019 2020

Year of Dates
(All) 2019 2020

Month of Dates
January February March April May June July August September October November December

Year of Dates
(All) 2019 2020



Usage
52,444 326,221

Year of Dates
2019 2020

Year of Dates
(All) 2019 2020

Month of Dates
January February March April May June July August September October November December

Year of Dates
(All) 2019 2020

Home bar top consumption region wise state consumption quarter wise usage year wise usage metrocity states Dashboard 1 Dashboard 2 Dashboard 3 Story on electricity consumption calculation fields

Story Implementation :

A Tableau Story was created to present insights in a step-by-step flow including overall trends, peak consumption periods, and regional usage patterns.

Examples:

- Story point showing yearly electricity consumption trend
- Story point highlighting peak usage months

Story on electricity consumption in india

