

Electricity Data Architecture and Flow Diagram

System Architecture Overview

This project follows a layered data pipeline:



Data Flow Description

Step 1: Data Collection

- Dataset: Consumption.csv
- Time Period: Jan 2019 – Dec 2020
- Attributes:
 - State
 - Region
 - Latitude
 - Longitude
 - Date
 - Usage (Mega Units)

Step 2: Database Storage

- Data imported into MySQL

- Table created: electricity consumption
- Indexed on:
 - State
 - Date
 - Region

Step 3: SQL Operations

Queries Performed:

- Total consumption by year
- Region-wise aggregation
- Monthly aggregation
- Quarter-wise grouping
- Top N / Bottom N states
- Pre-lockdown vs Post-lockdown comparison

Step 4: Tableau Integration

- Connected MySQL to Tableau
- Created calculated fields:
 - Year
 - Quarter
 - Month
 - Lockdown Period Indicator
- Applied filters
- Built dashboard
- Designed story scenes

Step 5: Web Publishing

- Published to Tableau Public
- Embedded dashboard in Flask app
- Integrated with HTML interface

Data Flow Diagram Content

You should create a diagram showing:

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CSV → MySQL → SQL Queries → Tableau → Dashboard → Public → Flask UI
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