**Project Development Phase**

**Model Performance Test**

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| --- | --- |
| Date |  |
| Team ID | LTVIP2025TMID59112 |
| Project Name | Plugging into the Future: An Exploration of Electricity Consumption Patterns Using Tableau |
| Maximum Marks |  |

**Model Performance Testing:**

Project team shall fill the following information in model performance testing template.

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| **S.No.** | **Parameter** | **Screenshot / Values** |
|  | Data Rendered | Electricity consumption data from states and regions of India from 2019–2020 in .csv. Columns used include Region, State, Date, MU, Month, Quarter, and Lockdown. |
|  | Data Preprocessing | Null values handled, new fields derived (Quarter, Month, Lockdown), filtered for required years. This was done using Python (Pandas) and stored in MySQL before importing into Tableau. |
| 3. | Utilization of Filters | Filters applied in dashboard:   * **Region** * **State** * **Year** * **Quarter** * **Lockdown (Yes/No)** Used across all dashboards to enhance interactivity. | | 4 | **Calculated Fields Used** | Created fields in Tableau: * Year(Date) * Month(Date) * Quarter(Date) * Lockdown Label for categorizing data before and after lockdown. * Top N States (for usage comparison). | | 5 | **Dashboard Design** | **Number of Visualizations:** 3 Dashboards Each dashboard includes: * Line Chart (Monthly trends) * Bar Chart (State-wise comparison) * Map / Tree Map (Region-wise consumption) * KPI indicators (Total and Average Usage) 📎 Refer: *Screenshots of Dashboard.pdf* | | 6 | **Story Design** | **Number of Slides/Graphs in Story:** 15 Covers: * Intro & Problem * State-wise Usage * Lockdown Comparison * Regional Patterns * Seasonal Trends * Insights + Conclusion |
| 4. | Calculation fields Used | | **Field Name** | **Formula (in Tableau)** | **Purpose** | | --- | --- | --- | | Year | YEAR([Date]) | To filter and group usage by year (2019, 2020) | | Month | DATENAME('month', [Date]) | For month-wise trend analysis | | Quarter | QUARTER([Date]) or DATENAME('quarter', [Date]) | To compare quarterly usage | | Lockdown Flag | IF [Date] < #2020-03-24# THEN 'Pre-Lockdown' ELSE 'Post-Lockdown' END | To analyze impact of COVID-19 lockdown | | Total Usage | SUM([MU]) | Calculate total electricity consumption | | Average Usage | AVG([MU]) | Show average usage per month/region | | Top States | INDEX() (used with sorting + filters) | To display top 5 and bottom 5 states | |
| 5. | Dashboard design | No of Visualizations / Graphs - 3 Dashboards , 8 Visualizations / Graphs. |
| 6 | Story Design | No of Visualizations / Graphs -12 slides. |