

## Model Development Phase

|               |   |
|---------------|---|
| Date          | 1 July 2024                               |
| Team ID       | 739945                                    |
| Project Title | Power Consumption Analysis for Households |
| Maximum Marks | 5 Marks                                   |

### Feature Selection Report

In the forthcoming update, each feature will be accompanied by a brief description. Users will indicate whether it's selected or not, providing reasoning for their decision. This process will streamline decision-making and enhance transparency in feature selection.

| Feature               | Description   | Selected (Yes/No) | Reasoning  |
|-----------------------|---|-------------------|--|
| datetime              | Represents the date and time of the power consumed  | No                | Not required for predicting the power consumption                                  |
| Global_active_power   | The total active power consumed by the household.   | Yes               | This is the value we are predicting; this is total power consumed by households.   |
| Global_reactive_power | The total reactive power consumed by the household. | Yes               | Reactive power helps to regulate voltage levels which would be useful in analysis. |

|                  |   |     |  |
|------------------|---|-----|--|
| Voltage          | Average voltage (in volts)                                      | No  | The voltage has no direct relationship with the active power.          |
| Global_intensity | Average current intensity                                       | Yes | Strong correlation with the Global active power.                       |
| Sub_metering_1   | Active energy for kitchen                                       | Yes | Sub meters are important to measure the net consumption of households. |
| Sub_metering_2   | Active energy for laundry                                       | Yes | Sub meters are important to measure the net consumption of households. |
| Sub_metering_3   | Active energy for climate control systems (water-heater and Ac) | Yes | Sub meters are important to measure the net consumption of households. |