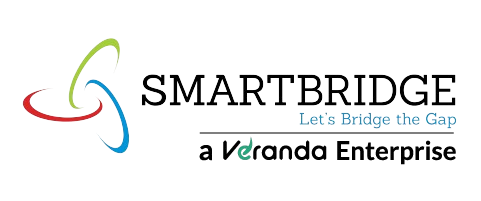
|  |  |  |  |
| --- | --- | --- | --- |
| **Feature** | **Description** | **Selected(Yes/No)** | **Reasoning** |
| Vehicle Type | Type of vehicle (e.g., sedan, truck, van) | Yes | Different vehicle types have varying fuel efficiency and usage patterns. |
| Engine Size | Engine displacement  in liters | Yes | Larger engines generally consume more fuel. |
| Mileage | Total distance traveled by the vehicle | Yes | Higher mileage typically correlates with higher fuel consumption. |
| Fuel Type | Type of fuel used (e.g., gasoline, diesel, electric) | Yes | Different fuel types have different consumption rates and costs. |
| Driving Conditions | Road and traffic conditions during trips | No | Insufficient data to accurately quantify impact on fuel consumption. |
| Driver Behavior | Driving style and habits (e.g., aggressive, conservative) | Yes | Aggressive driving can significantly increase fuel consumption. |

**Model Development Phase Template**

|  |  |
| --- | --- |
| Date | 15th July 2024 |
| Team ID | 739933 |
| Project Title | Prediction Modeling For Fleet Fuel Management Using ML |
| Maximum Marks | 5 Marks |

**Feature Selection Report Template**

The feature selection report for predictive modeling of fleet fuel consumption using machine learning documents the process of identifying the most significant variables. This includes an overview of the dataset, methodologies like statistical tests and machine learning algorithms employed for feature selection, and the final chosen features with their importance scores. The report concludes with a summary of how these selected features enhance model performance and recommendations for future improvements.

|  |  |  |  |
| --- | --- | --- | --- |
| Maintenance History | Record of  maintenance activities performed | No | Lack of detailed maintenance records for accurate analysis. |
| Weather Conditions | Weather conditions during vehicle operation | Yes | Weather can impact fuel efficiency (e.g., extreme temperatures, rain). |
| Load Weight | Weight of the cargo or passengers carried | Yes | Heavier loads increase fuel consumption. |
| Route Type | Type of route (e.g., urban, highway) | Yes | Different routes have  different fuel efficiency due to varying speeds and stop frequencies. |

