Model Development Phase Template

Date	15th July 2024
Team ID	739740
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.

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.

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.