

Model Development Phase Template

Date	13th October 2024
Team ID	LTVIP2024TMID24968
Project Title	TrafficTelligence Advanced Traffic Volume Estimation with Machine Learning
Maximum Marks	5 Marks

Feature Selection Report Template

The Feature Selection Report details the rationale for selecting specific features (e.g., temperature, time of day, weather conditions) for the traffic volume prediction model. It evaluates the relevance, importance, and impact of these features on predictive accuracy, ensuring the inclusion of key factors that influence the model's ability to estimate traffic flow and identify congestion patterns accurately.

Feature	Description	Selected (Yes/No)	Reasoning
holiday	Tells if that particular day is a holiday or not	Yes	Influence the traffic volume data
temp	It says about the temperature on that day	Yes	Temperature impacts the traffic volume.

rain	It says whether it is raining or not	Yes	Rain impacts the traffic.
snow	It says whether it is snowing or not	Yes	Snow blocks the road so it impacts the traffic congestion.
weather	Tells about the weather on that particular day	Yes	Different weather conditions lead to different effects on traffic patterns, commuter behavior, and travel times.
date	It gives the date of that particular day	Yes	It influences commuting patterns, with variations on weekdays, holidays, and seasons affecting traffic volume.
time	The time at which traffic volume is	Yes	By incorporating time features, we can identify peak hours, optimize traffic management strategies, and improve predictions for traffic volume throughout the day.
Traffic volume	It gives data on traffic volume based on all features	Yes	Analyzing traffic volume helps identify congestion patterns, optimize traffic flow, and inform infrastructure planning, enabling better traffic management and improved commuter experiences