Project Design Phase

Proposed Solution Template

Date	23 june 2025
Team ID	LTVIP2025TMID41942
Project Name	Traffic telligence : advanced traffic volume estimation with machine learning
Maximum Marks	2 Marks

📋 **Proposed Solution Template – TrafficTelligence**

S.No	Parameter	Description
1.	**Problem Statement**	Urban areas suffer from unpredictable traffic congestion, causing delays, fuel waste, and stress. There is no system that can estimate traffic volume in advance using local conditions like weather.
2.	**Idea / Solution Description**	TrafficTelligence is a web-based machine learning application that predicts traffic volume in real-time using weather-related inputs such as temperature, rain, snow, and cloud coverage. Users enter the data into a simple web form, and the app instantly shows a predicted traffic volume using a trained model.
3.	**Novelty / Uniqueness**	Unlike typical traffic mapping tools, TrafficTelligence predicts **future** traffic volume based on weather — a forward-looking solution. It's lightweight, easy to deploy, and can integrate real-time APIs for dynamic input.
4.	**Social Impact / Customer Satisfaction**	Reduces commute uncertainty, improves trip planning, saves fuel, and supports sustainable urban development. It can help city planners, logistics companies, and daily commuters make informed decisions.
5.	**Business Model (Revenue Model)**	- Freemium model: Basic version free, advanced features (API access, analytics) behind a subscription - Licensing to smart city administrations - Ads or sponsored integrations with logistics platforms
6.	**Scalability of the Solution**	Highly scalable — can integrate live data, support millions of users, and expand across cities by retraining the model with local data. Cloud hosting (e.g., AWS, Render) can handle growth effectively.