Project Design Phase
Proposed Solution Template

Date	16 June 2025
Team ID	**LTVIP2025TMID38998**
Project Name	TrafficTelligence Advanced Traffic Volume Estimation With Machine Learning
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in the proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Traditional traffic monitoring systems are either manual, expensive, or inefficient, resulting in delays, congestion, and poor urban traffic planning. There is a need for an automated, accurate, and real-time traffic volume estimation system.
2.	Idea / Solution description	The proposed solution, "Traffic Telligence", leverages machine learning models to analyze traffic video feeds or datasets to estimate vehicle count and traffic volume in real time. It includes data preprocessing, feature extraction, model training, and prediction pipelines. The system improves traffic flow analysis and can be used by municipal corporations, traffic authorities, and smart city planners.
3.	Novelty / Uniqueness	Unlike traditional sensors or manual counting, our approach uses data-driven ML techniques which offer scalability, low cost, and adaptability to different locations. The model can adapt over time as more data is collected, increasing its accuracy.
4.	Social Impact / Customer Satisfaction	Reduces traffic congestion and enhances public safety by enabling timely interventions. Helps in better infrastructure planning and decision-making. It can improve commuter experience by enabling dynamic signal management based on real-time volume.
5.	Business Model (Revenue Model)	The solution can be offered as a SaaS product to government bodies and urban infrastructure companies. Revenue can be generated through subscriptions, licensing, customization, and maintenance services.
6.	Scalability of the Solution	The solution is highly scalable and can be integrated with existing traffic cameras or IoT devices. With cloud deployment, it can be extended to multiple cities and regions, supporting real-time analytics .