# Project Design Phase

## Proposed Solution Template

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| Date | 27 June 2025 |
| Team ID | LTVIP2025TMID39957 |
| Project Name | TrafficTelligence: Advanced Traffic Volume Estimation With Machine Learning |
| Maximum Marks | 2 Marks |
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Proposed Solution Template:

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

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| S.No. | Parameter | Description |
| 1. | Problem Statement (Problem to be solved) | Urban areas suffer from unpredictable traffic congestion, leading to increased travel times, pollution, and commuter stress. Existing manual or sensor-based systems are costly and often fail to provide accurate real-time traffic volume estimates. |
| 2. | Idea / Solution description | We propose a machine learning-based system that uses historical and real-time data (like weather, events, time, etc.) to predict traffic volume accurately. This helps city planners, commuters, and traffic authorities to make informed decisions. |
| 3. | Novelty / Uniqueness | Our solution integrates multiple dynamic features and applies advanced machine learning techniques to generate highly accurate predictions. Unlike traditional models, it adapts to varying conditions and can scale across geographies. |
| 4. | Social Impact / Customer Satisfaction | The system can significantly reduce commuting time, enhance user satisfaction, and lower emissions by helping manage traffic flow better. It supports smart city initiatives and improves the quality of urban life. |
| 5. | Business Model (Revenue Model) | The platform can be offered as a SaaS solution to municipal corporations, logistics companies, and navigation apps. Revenue can be generated through subscriptions or usage-based billing models. |
| 6. | Scalability of the Solution | Our solution is easily scalable across cities and can integrate new data sources with minimal configuration. It supports both centralized and distributed deployment models, ensuring adaptability and robustness. |