**Project Design Phase**

**Proposed Solution Template**

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| **Date** | 27 JUNE 2025 |
| **Team ID** | LTVIP2025TMID59882 |
| **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.

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| **S.No.** | **Parameter** | **Description** |
|  | Problem Statement (Problem to be solved) | Traditional traffic volume estimation methods (like manual counts and loop detectors) are outdated, expensive, non-scalable, and lack real-time adaptability. |
|  | Idea / Solution description | Develop a machine learning-based system that uses real-time GPS, historical traffic data, and weather inputs to predict traffic volume with high accuracy and responsiveness. |
|  | Novelty / Uniqueness | - Uses dynamic, real-time data integration  - Employs advanced ML techniques like LSTM for time-series forecasting  - Reduces infrastructure dependency. |
|  | Social Impact / Customer Satisfaction | - Reduces urban congestion and pollution  - Saves commuter time and fuel  - Enables smarter city planning  - Increases public satisfaction with smoother traffic flow. |
|  | Business Model (Revenue Model) | - B2G (Business to Government) licensing model for municipalities  - Subscription-based model for private logistics or ride-hailing firms  - API access charges |
|  | Scalability of the Solution | - Highly scalable across cities and regions  - Easily trainable on new datasets  - Minimal additional infrastructure needed for expansion |