**Project Design Phase**

**Proposed Solution Template**

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| Date | 15 February 2025 |
| Team ID | PNT2022TMID45799 |
| 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) | Urban commuters and city planners face challenges with unpredictable traffic, congestion during peak hours, and lack of accurate forecasting to aid real-time decisions. |
|  | Idea / Solution description | TrafficTelligence is a machine learning-based system that analyzes historical traffic data, weather conditions, date/time, and events to estimate traffic volume accurately. It helps commuters plan routes and city planners improve infrastructure. |
|  | Novelty / Uniqueness | Unlike standard navigation apps, this solution provides **predictive traffic volume estimation** using **machine learning models**, not just real-time traffic snapshots. |
|  | Social Impact / Customer Satisfaction | Reduces time wasted in traffic, improves daily commuting experience, supports sustainable mobility, and enables smarter infrastructure decisions for city authorities. |
|  | Business Model (Revenue Model) | Freemium model: basic traffic prediction for users; premium features for B2B (city authorities, navigation app partners). Also, potential API access model for third parties. |
|  | Scalability of the Solution | Easily scalable to new cities with localized data. Can be integrated with GPS systems, public transport, and smart city dashboards. Future scope includes real-time IoT sensor data integration. |