**Project Design Phase**

**Proposed Solution**

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| Date | 27 june 2025 |
| Team ID | LTVIP2025TMID40771 |
| Project Name | Traffictelligence |
| 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** |
| 1. | Problem Statement (Problem to be solved) | Urban commuters, traffic managers, and delivery drivers need a reliable way to predict traffic volume based on weather conditions, time, and holidays because current methods lack real-time accuracy, leading to delays, poor route planning, and inefficient traffic management. |
| 2. | Idea / Solution description | A web-based application that uses a pre-trained machine learning model  (RandomForestRegressor) to predict traffic volume based on user-inputted weather, time, and holiday data, displayed through an intuitive interface |
| 3. | Novelty / Uniqueness | Combines real-time user inputs with a scalable machine learning model, offering a free, accessible tool without requiring user registration, unlike commercial traffic apps. |
| 4. | Social Impact / Customer Satisfaction | Reduces travel time and stress for commuters, improves safety and efficiency for traffic managers, and optimizes delivery schedules for drivers, enhancing overall urban mobility. |
| 5. | Business Model (Revenue Model) | Currently free with potential for a premium subscription (e.g., SuperGrok-style) offering advanced features like real-time weather integration or historical data analysis |
| 6. | Scalability of the Solution | Designed for local deployment with potential to scale to cloud services (e.g., AWS) to handle increased users and integrate real-time data sources. |