**Project Design Phase**

**Proposed Solution Template**

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| Date | 15 February 2025 |
| Team ID | LTVIP2025TMID34541 |
| 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(Problem to be solved) | Accurate traffic volume prediction is challenging due to changing weather, time patterns, and outdated methods. This project solves that by using machine learning to forecast traffic based on real-world data, helping urban planners and commuters make smarter decisions. |
|  | Idea / Solution description | Our project, TrafficTelligence, is a web-based machine learning system that predicts traffic volume based on factors like time, weather, and past data. It helps users (like commuters and city planners) make better decisions to avoid traffic and plan smarter infrastructure. |
|  | Novelty / Uniqueness | Unlike regular traffic maps that only show current congestion, our solution predicts future traffic using regression models. It also uses different types of input data together, which most systems don’t do. This makes the prediction smarter and more reliable. |
|  | Social Impact / Customer Satisfaction | The tool reduces time wasted in traffic, helps cities plan better roads, and supports eco-friendly travel by cutting down fuel usage. It’s useful for drivers, planners, and tech enthusiasts who want smarter cities and smoother travel. Users will feel more confident and less stressed while commuting. |
|  | Business Model (Revenue Model) | The solution can be monetized by offering premium features like:  1,Live traffic suggestions for navigation apps  2,Subscription model for urban planners and developers  3,API access for startups working on mobility solutions |
|  | Scalability of the Solution | This project is scalable because it can be deployed in different cities by updating the local traffic data. It can also be extended to predict road accidents, traffic jams, or even parking availability—making it future-ready for smart cities. |