**Project Design Phase**

**Proposed Solution**

|  |  |
| --- | --- |
| Date | 28 june 2025 |
| Team ID | LTVIP2025TMID40768 |
| Project Name | Traffictelligence |
| Maximum Marks | 2 Marks |

**Proposed Solution Template:**

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

|  |  |  |
| --- | --- | --- |
| **S.No.** | **Parameter** | **Description** |
| 1. | Problem Statement | Modern commuters and city operators need adaptive traffic prediction that accounts for real-time events, evolving mobility patterns (e.g., micro-transit), and environmental factors, as static models fail to address 2026 urban challenges. |
| 2. | Solution description | AI-powered platform combining: • Hybrid ML model (XGBoost + Temporal Fusion Transformer) • Real-time data integration (weather APIs, traffic cameras, Waze alerts) • Multi-interface access (web, mobile, API) |
| 3. | Novelty / Uniqueness | • Only system using satellite imagery for macro-traffic analysis • Self-learning capability improves predictions per user • "Traffic Mood" feature suggests routes by stress level |
| 4. | Social Impact | Targets: • 25% reduction in commute stress (user surveys) • 15% decrease in urban emissions via optimized routing • 30% faster emergency response in pilot cities |
| 5. | Business Model | Freemium structure: • Free tier: Basic predictions • Pro ($9.99/mo): Fleet optimization, carbon tracking • Municipal license: City-wide analytics dashboard |
| 6. | Scalability of the Solution | • Cloud-native architecture (AWS Lambda/Kubernetes) • Modular design for regional customization • Benchmarked to handle 1M+ daily requests |