**REQUIREMENT ANALYSIS**

**Functional Requirements**

|  |  |
| --- | --- |
| Date | 28 JUNE 2025 |
| Team ID | LTVIP2025TMID59766 |
| Project Name | **TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning** |
| Maximum Marks | 4 Marks |

**Functional Requirements:**

| **Requirement ID** | **Functional Requirement** |
| --- | --- |
| FR-1 | Ingest historical traffic data |
| FR-2 | Capture real-time data from sensors, cameras, APIs |
| FR-3 | Preprocess and clean data |
| FR-4 | Apply machine learning models for traffic prediction |
| FR-5 | Visualize traffic data on dashboards/maps |
| FR-6 | Generate alerts for high congestion |
| FR-7 | Support API for external applications |
| FR-8 | Store predictions and historical data |

**Non Functional Requirements:**

| **Requirement ID** | **Non-Functional Requirement** |
| --- | --- |
| NFR-1 | High availability and scalability |
| NFR-2 | Real-time response with minimal latency |
| NFR-3 | Data privacy and security |
| NFR-4 | User-friendly and responsive UI |
| NFR-5 | Integration with existing city management systems |
| NFR-6 | Reliable data backup and disaster recovery |