

Project Design Phase-II
Solution Requirements (Functional & Non-functional)

Date	16 June 2025
Team ID	LTVIP2025TMID45739
Project Name	TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning
Maximum Marks	4 Marks

Functional Requirements:

Following are the functional requirements of the proposed solution.

FR No.	Functional Requirement (Epic)	Sub Requirement (Story / Sub-Task)
FR-1	User Registration	<ul style="list-style-type: none">- Registration through Form- Registration via Gmail- Registration via LinkedIn
FR-2	User Confirmation	<ul style="list-style-type: none">- Confirmation via Email- Confirmation via OTP
FR-3	Real-time Traffic Monitoring	<ul style="list-style-type: none">- Video Feed Input- Object Detection (Vehicles)- Traffic Density Calculation
FR-4	Intelligent Traffic Alerts	<ul style="list-style-type: none">- Congestion Alert- Accident Detection- Notifications to Authorities
FR-5	Dashboard for Authorities	<ul style="list-style-type: none">- Area-wise Traffic Status- Heatmap View- Historical Data Trends
FR-6	User Feedback Collection	<ul style="list-style-type: none">- Rate Signal Timings- Report Traffic Issues

Non-functional Requirements:

Following are the non-functional requirements of the proposed solution.

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	User-friendly interface for traffic staff and admin
NFR-2	Security	Encrypted video feeds, secure login, role-based access
NFR-3	Reliability	Consistent traffic detection and monitoring without major failures
NFR-4	Performance	Fast response time even during peak traffic hours
NFR-5	Availability	System availability > 99.9% with minimal downtime
NFR-6	Scalability	Expandable to new locations, new data sources, and more users