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

Date	31 January 2025
Team ID	LTVIP2025TMID36588
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	Registration through Form Registration through Gmail Registration through LinkedIN
FR-2	User Confirmation	Confirmation via Email Confirmation via OTP
FR-3	Traffic Data Processing	Data collection from sensors Preprocessing traffic data Handling missing/inconsistent values
FR-4	Traffic Prediction & Visualization	ML-based volume prediction Live traffic dashboard -Visualization using charts & maps
FR-5	Alerts & Notifications	- Congestion alerts to authorities - Push/email alerts to users
Fr-6	User Login	- View analytics & logs - Manage user access and permissions

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	The system should have an intuitive and user-friendly interface for all user roles.
NFR-2	**Security**	The system must ensure secure login, encrypted data transmission, and role-based access control.
NFR-3	**Reliability**	The system should provide accurate predictions and remain functional without frequent failures.
NFR-4	**Performance**	The system must respond to user actions and prediction requests with minimal latency (<1s).

NFR-5	**Availability**	The system should be accessible at least 99% of the time, even during high traffic.
NFR-6	**Scalability**	The system should be scalable to handle increasing data volume and number of users without performance degradation.