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

Date	15 june 2025
Team ID	LTVIP2025TMID41330
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	not required
FR-3	Traffic volume prediction	User inputs weather, time, and date Submit form and receive predicted traffic volume Display result on web page
FR-4	Model managemnet	Load pre-trained model from file Load encoder Use model to predict based on input features
FR-5	User interface	Build frontend using HTML, CSS Show form, input fields, and result area
FR-6	Deployment	Host app using Flask Run locally or on cloud (Render/Railway)

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	**Usability**	Simple and intuitive web interface with easy form-based input for users
NFR-2	**Security**	User data is handled securely; model files are stored locally or encrypted
NFR-3	**Reliability**	The model gives consistent predictions when same inputs are provided repeatedly
NFR-4	**Performance**	Fast model response; predictions returned within 1–2 seconds
NFR-5	**Availability**	Application can be accessed locally or deployed on cloud for 24/7 access
NFR-6	**Scalability**	The model and app can be scaled by retraining with new city data and cloud hosting