

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

Date	27 june 2025
Team ID	LTVIP2025TMID38854
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 Input	Form input for date, time, weather, temperature, etc. Input validation for numerical and categorical fields
FR-2	Prediction	Model prediction using ML with trained model (.pkl) Output traffic volume as numeric result
FR-3	User Interface (UI)	Simple, user-friendly HTML form Result display page after submission
FR-4	Deployment	Hosting via Flask locally or on platform (e.g., Heroku) Backend handles model and scaler loading correctly

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Simple UI for user to input values easily and understand predictions
NFR-2	Security	No sensitive data stored; safe handling of user input
NFR-3	Reliability	Model always gives result if valid inputs are given
NFR-4	Performance	Fast response time (within seconds) for each prediction
NFR-5	Availability	Application is available for use whenever server is running
NFR-6	Scalability	Future extension possible for large-scale city traffic prediction systems