

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

Date	31 January 2025
Team ID	SBAP0043397
Project Name	TrafficIntelligence: advanced traffic volume estimation
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	Data Upload/Input	Upload video footage Connect to live CCTV camera feed Upload CSV/Excel traffic data
FR-4	Vehicle Detection & Tracking	Detect moving vehicles in video Classify vehicle types (car, bus, truck, etc.) Track vehicle counts by frame/time
FR-5	Volume Estimation	Estimate traffic volume per minute/hour/day Aggregate traffic by vehicle type or direction
FR-6	Dashboard Visualization	Display graphs and heatmaps Show live traffic volume Historical traffic trend comparison
FR-7	Notifications & Alerts	Alert on traffic congestion Alert on abnormal traffic spikes
FR-8	Report Generation	Download daily/weekly reports Export data to CSV/PDF
FR-9	Admin Panel	Manage users Review uploaded videos/data Monitor system performance

Non-functional Requirements:

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

FR No.	Non-Functional Requirement	Description
NFR-1	Usability	Interface should be simple, intuitive, and user-friendly for both technical and non-technical users
NFR-2	Security	Ensure secure authentication and encryption of user data and video feeds
NFR-3	Reliability	System should consistently detect and count vehicles under various conditions
NFR-4	Performance	Real-time or near-real-time processing of video inputs with minimal latency
NFR-5	Availability	System should be accessible 24/7 with minimal downtime
NFR-6	Scalability	Should handle large volumes of data and easily integrate with more camera sources in the future