Project Design Phase-II

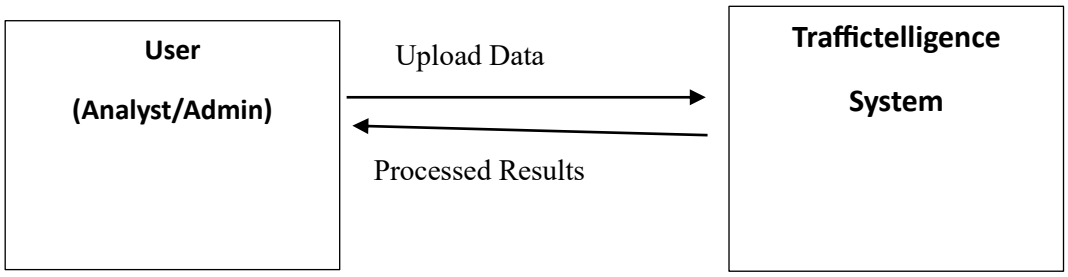
Data Flow Diagram & User Stories

Date	24 June 2025
Team ID	LTVIP2025TMID35493
Project Name	TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning
Maximum Marks	4 Marks

Data Flow Diagrams:

A Data Flow Diagram (DFD) is a traditional visual representation of the information flows within a system. A neat and clear DFD can depict the right amount of the system requirement graphically. It shows how data enters and leaves the system, what changes the information, and where data is stored.

Level 0 DFD – Context Level



Data Stores:

- Historical Traffic Dataset
- Uploaded Files
- Trained Models

External Systems (optional):

- Weather API (OpenWeatherMap)

- Live Traffic Feed API (Google Traffic)

User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Analyst (Web)	Data Upload	USN-1	As an analyst, I can upload traffic CSV files for analysis.	I receive confirmation of successful upload.	High	Sprint-1
Analyst (Web)	Visualization	USN-2	As an analyst, I can view traffic trends in graphs and charts.	I can interpret trends through visual insights.	High	Sprint-1
Analyst (Web)	Download Report	USN-3	As an analyst, I can download a PDF report of the results.	I can receive a well-formatted, complete traffic analysis report.	Medium	Sprint-2
Analyst (Web)	Compare Trends	USN-4	As an analyst, I can compare traffic patterns across different time periods.	I see comparative insights across dates/locations.	Medium	Sprint-3
Admin (Web)	Model Upload	USN-5	As an admin, I can upload/update the ML model used for traffic prediction.	The latest model is used after upload.	High	Sprint-1
Admin (Web)	History	USN-6	As an admin, I can monitor upload activity and analytics usage..	I can view logs of data uploads and predictions.	Medium	Sprint-3
System	Model Management	USN-7	As a system, I validate uploaded files and reject incorrect formats.	Only valid CSV/XLSX files are accepted.	High	Sprint-1

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
ML Service	Prediction	USN-8	As a model, I analyze the uploaded data and return traffic predictions.	I return congestion level, trend type, and anomaly detection within 5 sec.	High	Sprint-2
Support Executive	Query Handling	USN-9	As a support executive, I can answer analyst queries through a support portal.	I can read the query and reply within the platform.	Medium	Sprint-3
System	External Data Integration	USN-10	As a system, I fetch weather data via API to improve prediction accuracy.	External data is merged into prediction pipeline for enhanced output.	Medium	Sprint-3