

Project Design Phase-II

Data Flow Diagram & User Stories

Date	31 January 2025
Team ID	LTVIP2025TMID36498
Project Name	TrafficTelligence: Advanced Traffic Volume Estimation with Machine Learning
Maximum Marks	4 Marks

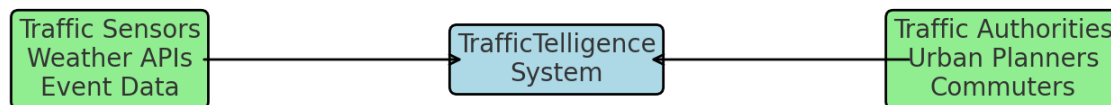
Data Flow Diagrams:

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.

TrafficTelligence – Data Flow Diagram and User Stories

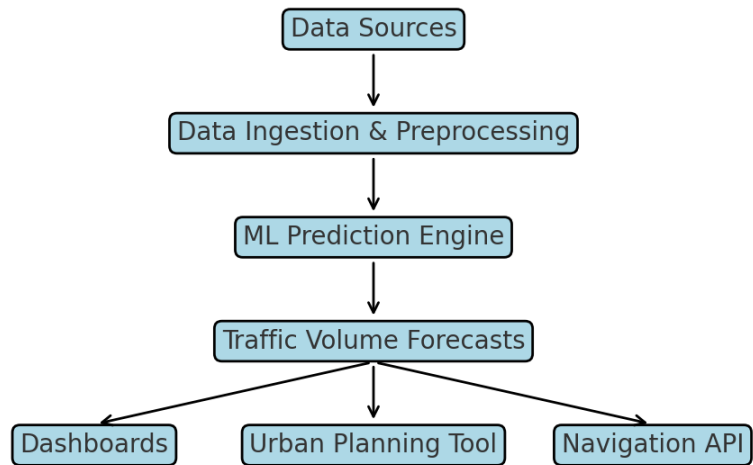
Level 0 Data Flow Diagram (Context Diagram)

This diagram illustrates how external entities interact with the TrafficTelligence system.



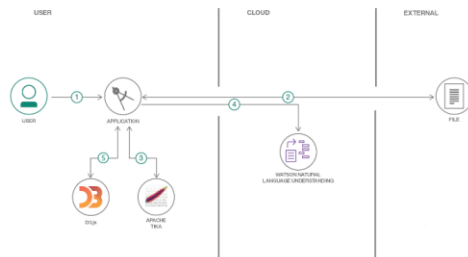
Level 1 Data Flow Diagram

A breakdown of the system's internal data processing and outputs.



Example: (Simplified)

Flow

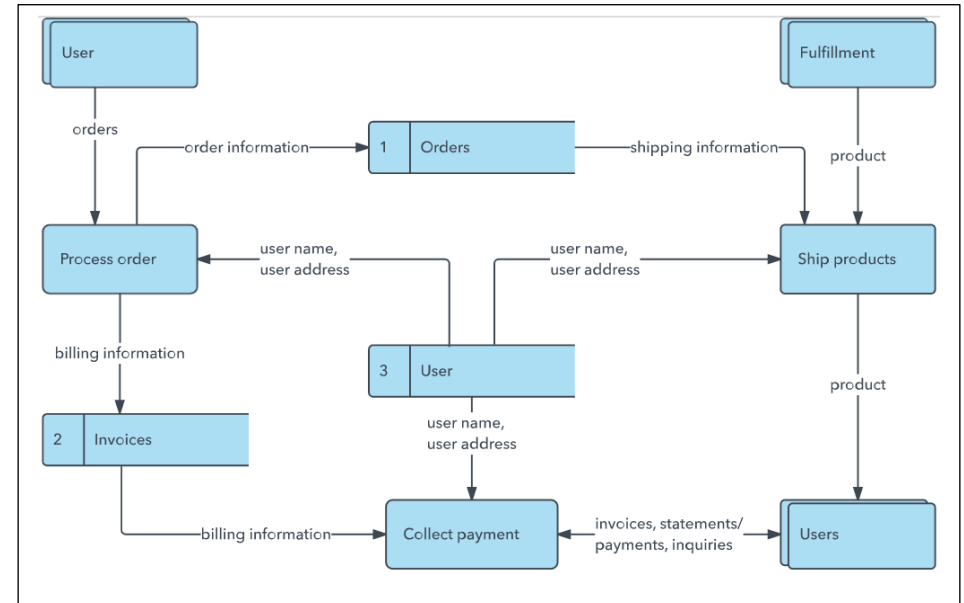


1. User configures credentials for the Watson Natural Language Understanding service and starts the app.
2. User selects data file to process and load.
3. Apache Tika extracts text from the data file.
4. Extracted text is passed to Watson NLU for enrichment.
5. Enriched data is visualized in the UI using the D3.js library.

User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority / Release
Traffic Authority Officer	Real-time Monitoring	USN-1	Monitor predicted traffic volume on a live dashboard.	See volume trends & adjust signals	High / Sprint-1
Urban Planner	Infrastructure Forecasting	USN-2	View future traffic	Generate area-wise	High / Sprint-2

Example: DFD Level 0 (Industry Standard)



			predictions to guide planning.	traffic projections	
Commuter	Route Optimization	USN-3	Receive alternate routes based on predicted traffic.	Get notified of optimal route & time	High / Sprint-3
Traffic Authority Officer	Event Impact Analysis	USN-4	Analyze how events/weather impact traffic.	View expected congestion impact	Medium / Sprint-2
App Developer	Navigation API	USN-5	Access traffic forecast data via API.	Receive JSON route-based forecasts	Medium / Sprint-3
City Administrator	Report Generation	USN-6	Download traffic reports for review.	Export PDF/Excel with prediction stats	Low / Sprint-4

User Stories

Use the below template to list all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Customer (Mobile user)	Registration	USN-1	As a user, I can register for the application by entering my email, password, and confirming my password.	I can access my account / dashboard	High	Sprint-1
		USN-2	As a user, I will receive confirmation email once I have registered for the application	I can receive confirmation email & click confirm	High	Sprint-1
		USN-3	As a user, I can register for the application through Facebook	I can register & access the dashboard with Facebook Login	Low	Sprint-2
		USN-4	As a user, I can register for the application through Gmail		Medium	Sprint-1
	Login	USN-5	As a user, I can log into the application by entering email & password		High	Sprint-1
	Dashboard					
Customer (Web user)						
Customer Care Executive						
Administrator						