:

Project Design Phase-II: Data Flow Diagram & User Stories

Date: 20 July 2025

Team ID: LTVIP2025TMID45340

Project Name: Traffic Volume Estimation

Maximum Marks: 4 Marks

Data Flow Diagram (DFD)

Here's a simple **Level 1 DFD** structure for your project:

```
sql

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| Web/App Interface | --->

| ML Model Engine |
| (Frontend + API) |

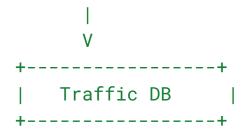
| Authority | | (Frontend + API) |
|

| (Prediction) |
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| Data Preprocess |
|

| Prediction Output |
+-------+
```



V Flow Summary:

- User sends request (e.g., for volume prediction)
- $\bullet \quad \text{Data flows via API} \rightarrow \text{preprocessing} \rightarrow \text{ML model}$
- Model sends response back to UI

User Stories

User Type	Function al Require ment (Epic)	User Story Numb er	User Story / Task	Acceptanc e Criteria	Prior ity	Rele ase
Customer (Web / Mobile user)	Traffic Prediction	USN- 1	As a user, I can input route details to get estimated traffic volume	I can see the traffic volume estimate for my selected route	High	Sprin t-1
Customer (Web / Mobile user)	Traffic Prediction	USN- 2	As a user, I can view historical traffic trends for a route	I can view traffic trends (chart / table)	Medi um	Sprin t-2

Traffic Authority	Dashboar d	USN- 3	As an authority, I can view real-time traffic data for different zones	I can see live volume data on a map/dashb oard	High	Sprin t-1
Traffic Authority	Alerts	USN- 4	As an authority, I can receive congestio n alerts based on predicted traffic	I get notified when predicted volume crosses threshold	High	Sprin t-2
Administr ator	Manage Users	USN- 5	As an admin, I can add or remove system users	I can manage user accounts through admin panel	Medi um	Sprin t-2
Administr ator	Model Monitorin g	USN- 6	As an admin, I can view model performan ce stats	I can view MAE, RMSE, R ² on dashboard	Medi um	Sprin t-3