Project Design Phase-II

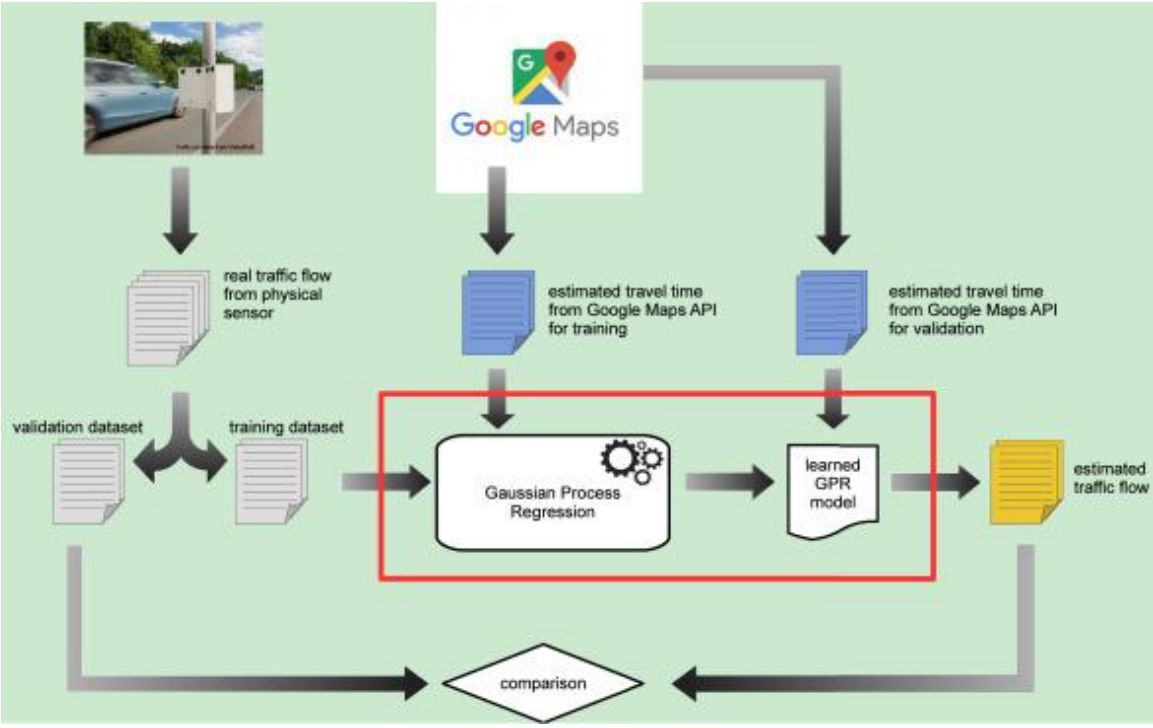
Data Flow Diagram & User Stories

Date	27th June 2025
Team ID	LTVIP2025TMID41765
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.

Example: Traffictelligence – Advanced Traffic Volume Estimation System



User Stories

List of all the user stories for the product.

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance Criteria	Priority	Release
User (Traffic Analyst)	Upload Data	USN-1	As a user, I can upload traffic sensor/video data to the system.	File successfully loaded and validated.	High	Sprint-1
User (Traffic Analyst)	Train Model	USN-2	As a user, I can train ML models (Random Forest, XGBoost) on historical data.	Models are trained, showing R^2, MAE, and RMSE.	High	Sprint-1
User (Traffic Analyst)	Predict Volume	USN-3	As a user, I can predict traffic volume for a selected road segment and time.	Predicted values are shown with confidence intervals.	High	Sprint-1
User (Traffic Analyst)	Visualize Traffic Patterns	USN-4	As a user, I can view graphical trends and heatmaps of traffic volume.	Visuals accurately reflect uploaded data patterns.	Medium	Sprint-2
Admin	Web Deployment	USN-5	As an admin, I can deploy the system on a web interface (Flask/Streamlit).	Web app allows all user stories via a browser.	Low	Sprint-3