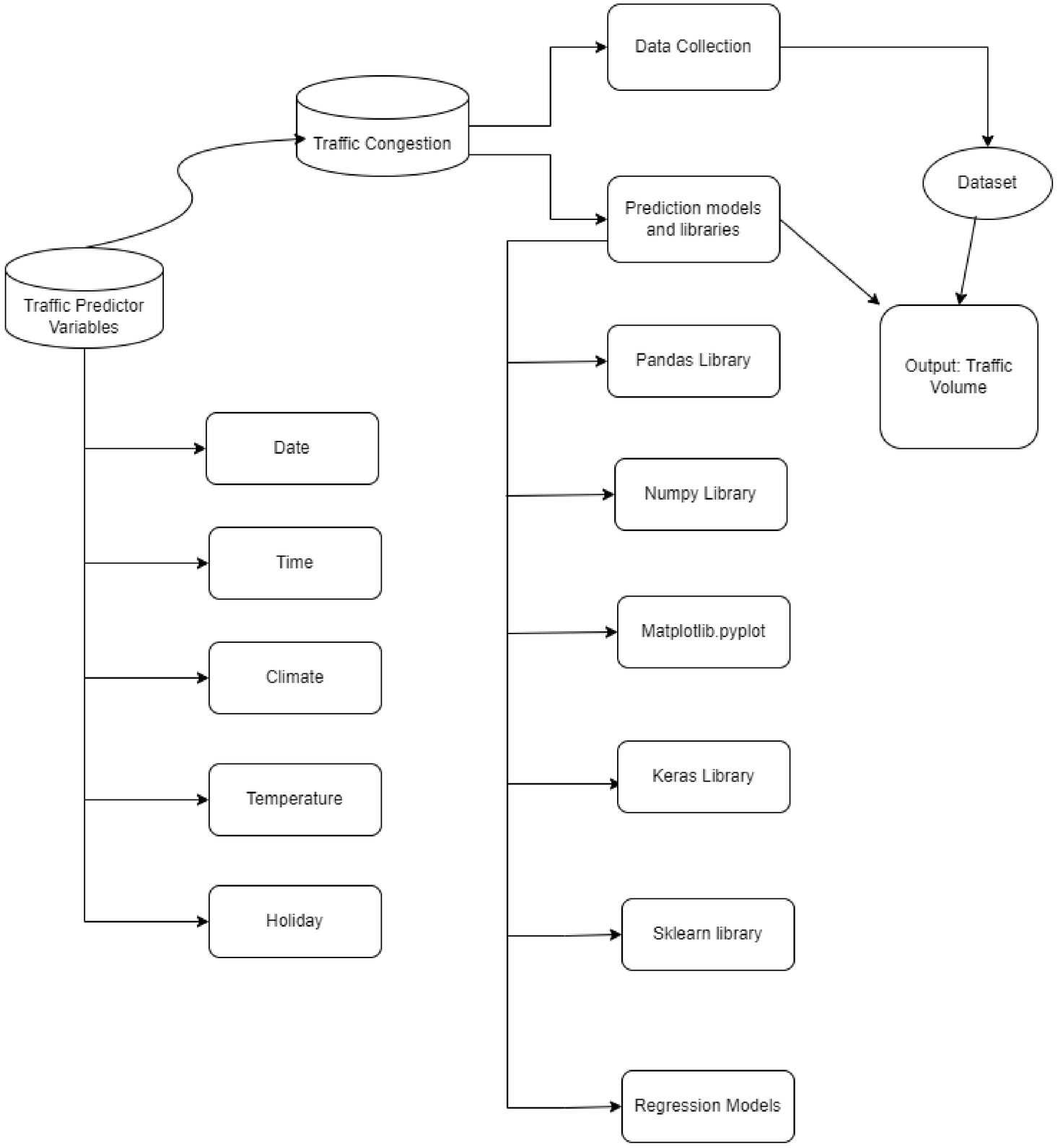
Project Design Phase-II

Data Flow Diagram & User Stories

Date	17th July, 2025
Team Id:	LTVIP2025TMID56158
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.


Data Collection
Traffic Congestion
Dataset
Prediction models and libraries
Traffic Predictor Variables
Pandas Library
Output: Traffic Volume
Date
Numpy Library
Time
Matplotlib.pyplot
Climate
Keras Library
Temperature
Sklearn library
Holiday
Regression Models

User Stories

User Type	Functional Requirement (Epic)	User Story Number	User Story / Task	Acceptance criteria	Priority	Release
Traffic Manager	Real-time Traffic Estimation	USN-1	As a Traffic Manager, I want to access real-time traffic volume estimations to make informed decisions for traffic control.	System provides accurate real-time traffic volume predictions. Data updates occur at least every 5 minutes. Data accuracy is within a 95% confidence interval.	High	Sprint 1
Driver	Real-time Traffic Estimation	USN-2	Application suggests a approximate congestion in the route.	Application suggests an approximate congestion in the route.	High	Sprint 1
Traffic Analyst	Data Insights on congestion volume	USN-3	As a Traffic Analyst, I want a Volume number displaying in-depth traffic insights for informed analysis and decision-making.	Volume number showcases traffic trends over various timeframes.	Medium	Sprint 2
Website Developer	Model building	USN-4	As an Web Developer, I want access to models that integrate Traffic Telligence data for incorporation into existing navigation applications.	Models provide accurate traffic data. Well-documented Models for easy integration. Allows access to real-time and predictive traffic estimations.	High	Sprint 2
City Planner	Customizable Traffic Solutions	USN-5	As a City Planner, I want customizable traffic solutions to accommodate specific city development needs.	System allows adjustments to traffic control strategies. Customization based on specific traffic conditions.	High	Sprint 3
Educational Institutions	Training	USN-6	implement data augmentation techniques (e.g., rotation, flipping) to improve the model's robustness and accuracy.	we could do testing	medium	Sprint 4
	Testing & quality assurance	USN-7	conduct thorough testing of the model and web interface to identify and report any issues or bugs. fine-tune the model hyperparameters and optimize its performance based on user feedback and testing results.	we could create web application	medium	Sprint 5