Project Design Phase
Solution Architecture

Date	27 june 2025
Team ID	LTVIP2025TMID59882
Project Name	TrafficTelligence : Advanced Traffic Volume Estimation with Machine Learning
Maximum Marks	4 Marks

SolutionArchitecture:

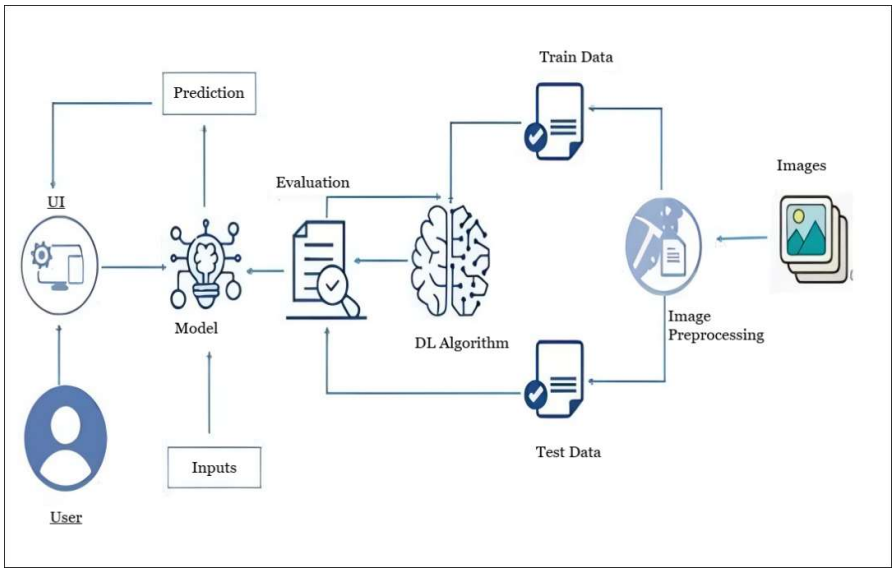
Traffic Intelligence: Advanced Volume Estimation Using Machine Learning" aims to enhance traffic volume estimation for urban planning and management. By collecting diverse traffic data and applying machine learning, the project seeks to provide real-time, accurate traffic volume predictions, historical analysis, and anomaly detection, ultimately contributing to more efficient and informed traffic management.

Oursolution uses many advanced Machine learning Algorithms toaddresstheTraffic Volume Estimation problem effectively.

Steps to be followed:-

1. Data Collection: Sensors, cameras, and IoT devices capture real-time traffic data.
2. Data Pre-processing: Clean and preprocess data to make an effective model.
3. Train Model: Using preprocessed data to make predictive models for forecasting traffic volume patterns for real-time estimations.
4. Test Model: To make sure that the model is accurate and efficient.
5. Integrating Model: To make a user facing applications so that the user can interact with the model.

SolutionArchitectureDiagram



Reference: https://aws.amazon.com/blogs/industries/voice-applications-in-clinical-research-powered-by-ai-on-aws-part-1-architecture-and-design-considerations/