

Project Design Phase-I
Solution Architecture

Date	19 October 2023
Team ID	Team-593022
Project Name	Vehicle Counter
Maximum Marks	4 Marks

Solution Architecture:

Creating a solution architecture for a vehicle counter machine learning project involves designing a system that can capture, process, and analyze data from cameras or sensors to count vehicles accurately.

Data Sources: Capture data from cameras and sensors.

Data Ingestion: Receive, validate, and store data with timestamps.

Data Preprocessing: Extract frames, enhance images, and detect vehicles.

Machine Learning Model: Train, evaluate, and fine-tune a vehicle detection model.

Vehicle Counting: Use the model for real-time vehicle detection and store counts.

Data Storage: Archive raw data and store historical vehicle counts.

Data Analysis and Reporting: Process data, generate insights, and create reports.

User Interface: Provide web and mobile app access for users and administrators.

External System Integration: Connect to external systems for enhanced functionality.

Security: Ensure data security through authentication, authorization, and encryption.

Compliance and Privacy: Comply with data privacy regulations and implement retention policies.

Solution Architecture Diagram:

