Project Design Phase-I
Solution Architecture

Date	17 May 2023
Team ID	NM2023TMID22560
Project Name	Project - AI Enabled Car Parking using openCV

Solution Architecture:

The solution architecture for the AI-enabled car parking system using OpenCV consists of the following components:

Cameras: Multiple cameras are strategically placed in the parking area to capture real-time video feeds.

Vehicle Detection and Tracking: OpenCV algorithms analyze the video feeds to detect and track vehicles, leveraging techniques such as object detection and motion tracking.

Parking Space Analysis: The system performs image processing and analysis to determine the occupancy status of parking spaces, utilizing techniques like image segmentation and pattern recognition.

Real-time Information and Guidance: The detected parking space availability and guidance information are processed and delivered to drivers through digital signage, mobile applications, or integration with navigation systems.

Backend and Data Analytics: The system includes a backend infrastructure to process the data, generate insights, and store historical parking data for further analysis, resource optimization, and decision-making.

Solution Architecture Diagram: