Project Design Phase-I
Proposed Solution Template

Date	02 May 2023
Team ID	NM2023TMID07918
Project Name	AI enabled car parking using open CV
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	• Finding available parking spaces in congested urban areas is a challenge for drivers, leading to time waste and increased traffic congestion. • The traditional approach of parking management has become obsolete and outdated, leading to inefficient use of parking spaces. • The problem that this system aims to solve is to develop a solution that helps drivers easily locate available parking spots and optimize the use of parking spaces.
2.	Idea / Solution description	• The proposed AI enabled car parking system will use computer vision techniques to analyze real-time video data captured by cameras placed at the entrance and exit of a parking lot. • The system will identify and track available parking spots and will provide information to drivers on the availability of parking spaces in real-time. • Additionally, the system will provide guidance to drivers, directing them to available parking spots, optimizing the use of parking spaces, and reducing traffic congestion.
3.	Novelty / Uniqueness	• The proposed system utilizes computer vision techniques to accurately detect and track available parking spots in real-time, making it unique compared to traditional parking management systems. • Additionally, the system's ability to provide real-time information to drivers on the availability of parking spaces and guide them to the nearest available spot, makes it a novel and unique solution in the parking management industry.

4.	Social Impact / Customer Satisfaction	• The proposed system will have a significant social impact on the community by reducing traffic congestion and improving traffic flow. • It will provide convenience to drivers by helping them locate available parking spots easily, saving time and reducing frustration. • Moreover, the system will promote sustainable development by optimizing the use of parking spaces, reducing traffic congestion, and mitigating environmental pollution caused by traffic congestion.
5.	Business Model (Revenue Model)	• The proposed system's revenue model will be based on a subscription-based service, charging parking lot owners a fee for using the system. • The system's revenue will also come from advertisers who can display targeted advertisements to drivers using the system.
6.	Scalability of the Solution	• The proposed system's scalability is high, making it suitable for large and small parking lots. • The system's modular design allows for easy integration and customization to fit the specific needs of parking lot owners. • Additionally, the system's use of open-source software like OpenCV allows for easy scalability and integration with other technologies.