Ideation Phase

Literature Survey

TEAM ID : NM2023TMID21776

COLLEGE NAME : ADHIPARASAKTHI ENGINEERING COLLEGE

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1.	Paper title	**" Car Parking Space Detection Using OpenCV"** Rahul Tekam, Shoheb Shaikh, Leela Bitla, Pranav Rathi and Hiamnshu Chambhare. In 2023"
	Problem Definition	- The problem of finding an appropriate parking space is a challenging one, particularly in large cities. - The increase in car ownership, parking spaces have become scarce.
	Methodology/ Algorithm	YOLOV3 Alogorithm, SSD Algorithm, Deep Learning (DL)
	Advantages	- It provide upgraded security, safety and privacy - Real Time Data ,Trend Insight and Optimized Parking
	Disadvantages	- It's effective at resolving parking issues. - In provides automatic billing

2.	Paper title	**"A Study on Smart Parking Space Allocator and Parking Management Using Opencv"** P.K.SheelaShanthakumari1, Dr.P.Selvarani2, Dr.J.Senthil Murugan2,Dr.W.T.Chembian2, M.Mithun Kumar3,M.Karthikeyan3, M.Govindaraj 2023
	Problem Definition	• At the point when the vehicles occupy a specific parking slot, the layout diverts quickly from green to red since the average colour has changed. • The image of car taken at entrance and exit. It also shows the bill generated according to the time interval of park in
	Methodology/ Algorithm	Parking management, Parking allocator, Raspberry pi, Opencv model, Cloud server
	Advantages	• To remove the stress out of parallel parking in a tight spot without the worry of accidents and make it easier • To maneuver in trafficConvenience and independence,saves time.
	Disadvantages	• The User will not know the Shortest path available to the parking • Security issues

3.	Paper title	**"Design And Simulation Of A Dynamic Smart Parking System With Image Segmentation And Deep Learning"** Mohammed Fouad Taha TAHA Master's Thesis Supervisor Asst. Prof. Dr. Abdullahi Abdu IBRAHIM Istanbul, 2022
	Problem Definition	• The parking problem is a worldwide issue. The intelligent parking space indications, to move the vehicle to spaces in various directions of the parking lot. • The complexity of the human visual system in order for computers to detect and analyze objects in images and videos in the same way that humans can, and this is referred to as "computer vision".
	Methodology/ Algorithm	Deep Learning (DL), Convolutional Neural Network (CNN), Support Vector Machine(SVM)
	Advantages	• The models based on decision trees is that the problem can be divided into several sub-problems, with clear decision rules.
	Disadvantages	• Expensive Construction & installation ,System breakdown • It requires both acutators and sensors.

4.	Paper title	"**Smart Parking System Using Image Processing**" Shruthi B, Raghottam Kulkarni, Sanath Kumar S, Dilip Kumar S Assistant Professor, Atria Institute of Technology, Bengaluru, Karnataka, India 2020
	Problem Definition	• If there exists any then the number plate of the car is scanned using the first camera and stored in cloud and let into the parking lot by displaying the slots available. If there are no empty slots available, then the same will be displayed. • A car enters the parking lot and the parking lot is checked for empty slots
	Methodology/ Algorithm	Image Processing, Optical Character Recognition, Multi-Storey Structures, Cloud Firestore
	Advantages	• Inherent Safety and Security • Enhanced User Experience and Integrated Payments and POS
	Disadvantages	• The parking System are usually automated ,they require regular maintenance to ensue everything is working smoothly • That's means software isn't broken &everything Works properly.

5.	Paper title	"**An Edge Based Smart Parking Solution Using Camera Networks and Deep Learning**" Harshitha Bura, Nathan Lin, Naveen Kumar, Sangram Malekar, Sushma Nagaraj, Kaikai Liu""in 2018 IEEE International Conference on Cognitive Computing.
	Problem Definition	• To evolve as an increasing number of cities struggle with traffic congestionand inadequate parking availability.
	Methodology/ Algorithm	VJ Algorithm, Deep learning, edge devices, smart cities, smart parking.
	Advantages	• It experience faster, more convenient and hassle-free. • To manage and reduce parking search traffic on the streets
	Disadvantages	• It expensive Construction & Installation. A parking management system It can cost a lot of money. • It Requires Regular Maintenance.