JAYPEE INSTITUTE OF INFORMATION TECHNOLOGY, SECTOR 62

MINOR PROJECT SYNOPSIS

Project:- Smart Parking System

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Abstract:-

In recent times the concept of smart cities have gained great popularity. Thanks to the evolution of Internet of things the idea of smart city now seems to be achievable. Consistent efforts are being made in the field of IoT in order to maximize the productivity and reliability of urban infrastructure. Problems such as, traffic congestion, limited car parking facilities and road safety are being addressed by IoT. In this paper, we present an IoT based cloud integrated smart parking system. The proposed Smart Parking system consists of an on-site deployment of an IoT module that is used to monitor and signalize the state of availability of each single parking space. A mobile application is also provided that allows an end user to check the availability of parking space and book a parking slot accordingly.

The aim of this project is to automate the car and the car parking as well. It discusses a project which presents a miniature model of an automated car parking system that can regulate and manage the number of cars that can be parked in a given space at any given time based on the availability of parking spot. Automated parking is a method of parking and exiting cars using sensing devices.

Application:-

Finding a free parking lot in a congested city like Delhi is very hard. Here, if anyone wants to go outside from home with personal car first thing comes in his mind is about parking, where he/she will park his car.

Most of the cases, people go to a parking station and find that all

parking slot are full and then he have to search for another

parking lot or that there is an available parking slot but difficult to find one in a big and multi-storied parking slots. So, it is a big hassle and many people keep in fear about parking of his car when he gets out with his car. I realized that, to enjoy a better transport a better parking system is necessary especially in a congested city like Delhi.

So the problem can be solved by a cloud based automated smart parking system and I hope implementing the system can remove the parking problem of my city.Using this system a user will be will able to find an available parking lot easily using mobile or web app from anywhere. The system updates parking data every 30 seconds.By virtue of their relatively smaller volume and mechanized parking systems, APS are often used in locations where a multi-story parking garage would be too large, too costly or impractical. Examples of such applications include, under or inside existing or new structures, between existing structures and in irregularly shaped areas.

Further Advancement:-

The future of the smart parking market is expected to be significantly influenced by the arrival of automated vehicles (AVs). Several cities around the world are already beginning to trial self-parking vehicles, specialized AV parking lots, and robotic parking valets.

The company's automated parking system uses lasers to scan cars and a robotic valet to park the vehicles. Vehicles are transported by a robotic dolly that lifts and transfers them to storage racks. Using this system, up to 4 times as many cars can be parked in the same amount of space as a traditional garage (since there is no need for extra space in between cars). The automated system is expected to deliver vehicles within 3-5 minutes of a retrieval request.

References:-

Md. Khairul Alam, "ARTIK cloud-based smart parking system.",

Available:-
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