Intelligent Car Parking System
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Abstract:
Parking in major cities, we introduce a new smart parking system that is based on intelligent resource allocation. In today’s life, parking of vehicle everyone needs. Be it in Malls, Cinemas, nearby Shops etc. We propose an idea which can help to solve the problem of parking allotment and parking area of the vehicle. Everyone wants to park his vehicle safely and under security. So parking system has to provide facility to coming user and safely park his car. This is android application with web portal application services. We present Smart Park, a smartphone based system that relaxes the requirement for specialized infrastructure. Switches will be placed on beach parking slot as a sensor to detect pressure of vehicle. By using GPRS the data of vacant parking slot will send to server. End user will have Android application to check parking is available or not.

Keywords: intelligent car parking system, IOT, Android app, Arduino controller, electrical switch.

I. INTRODUCTION
Paving in major cities, particularly with dense traffic, directly effects the traffic flow and people’s life. We introduce a new smart parking system that is based on intelligent resource allocation. In today’s life, parking of vehicle everyone needs. Be it in Malls, Cinemas, nearby Shops etc. We propose an idea which can help to solve the problem of parking allotment and parking area of the vehicle. Everyone wants to park his/her vehicle safely and under security. So parking system has to provide facility to coming user and safely park his/her car. This is android application with web portal application services. Studies have shown that in many places drivers often spend over 20 min looking for parking, contributing to as much as 30% of the total traffic. We present Smart Park, a Smartphone based system that relaxes the requirement for specialized infrastructure. Switches will be placed on beach parking slot as a sensor to detect pressure of vehicle. By using GPRS the data of vacant parking slot will send to server. End user will have Android application to check parking is available or not.

II. EXISTING SYSTEM
- Manual Car parking system has common issues such as Drivers cannot find parking as easily as they would like.
- Cars are sitting unused on the street for long periods.
- Increases traffic congestion and air pollution, and wastes gasoline and time.
- So for observing all this issues we develop Intelligence car parking system.
- By using GPRS the data of vacant parking slot will send to server.
- If parking is available then user can reserve that parking through Application.

III. PROPOSED WORK:
To provide easy parking location in the city. User can search a parking slot using mobile application. Main focus is providing the safety of a car. It also provide the reduce the traffic in cities and reduce the time. This system is providing android based application to find out the parking location into cities.

Figure 1. android, web service, parking

OBJECTIVES:
1. The main objective of this system is to provide easy parking that can save time and traffic.
2. By using GPRS the data of vacant parking slot will send to server.
3. User will have Android application by clicking Find Parking Button user can check weather parking is available or not.
4. If parking is available then user can reserve that parking through Application. So, Driver can easily park his car without facing any problem.

IV. ALGORITHM:
- Step 1: Register User
Step 1.1: Sent all user details to Web Service.
Step 1.2: Validate fields.
Step 2: Login User
Step 3: User Activity
Step 3.1: Search Nearest parking.
Step 3.2: Display nearby parking areas with allocated and free parking slot.
Step 3.3: Reserve Parking.
Step 4: Parking System
Step 4.1: Scan RFID on car.
Step 4.2: Gather sensor data.
Step 4.3: Send data to server.
Step 5: Server
Step 5.1: Reserve or free parking slot based on sensor data.
Step 6: Stop

V. FUTURE SCOPE

The development of this system is used for reservation of parking slots commanded by android application. Switches will be place on the beach parking slot as a sensor to detect pressure of vehicle. User will have Android application, by clicking Find Parking Button user can check weather parking is available or not. If parking is available then user can reserve that parking through Application. Once the car is out of the parking lot, notification will send to server that parking slot is free.

VI. CONCLUSION

From this we can conclude. The proposed system reduces the drivers effort and time to search parking space. System can direct and manage the number of cars that can be parked in given space at any given time based on availability of parking space after doing the registration by user using android application on his smart phone. Automated parking is a strategy for parking and leaving cars utilizing detecting device i.e., sensors. The entering to or leaving from parking lot is also commanded by an android based application.

VII. REFERENCES: