INSTITUTE OF ENGINEERING AND TECHNOLOGY, INDORE

Project Synopsis (2022)

Parking Garage

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Introduction:

The main objective of this project on the parking system is to manage the details of parking slots, vehicle number, parking duration, vehicle type and parking fees.
The purpose of the project is to build an application program to reduce the manual work for managing the parking slots, details, etc.

Literature Survey:

With the ever growing number of vehicles everyday, the difficulty of parking them is also growing exponentially. Parking Garage replaces the current parking system that involves manual and in-person guidance of parking area personnel.
It uses the computer vision library of python to scan the parking area and find the empty parking slot for the users while keeping track of parking duration and fees.
It uses MangoDB to keep track of all the required information.
Parking Garage has a user-friendly interactive interface developed using JavaScript, CSS, Bootstrap.

Problem Domain:

In the present scenario, the available parking system involves instruction by the parking staff which results in storing inaccurate details or missing records. This also makes the task very hectic and is not cast or time efficient.

Solution Domain:

- Accurate user information and no missing records
- Work becomes speedy
- Decrease the load of the person involved in existing manual system
- Easy to understand by the user and operator
- Easy and fast retrieval of information
- Reduce the cost of collecting the management and collection procedure will go on smoothly

System Domain:

Technology Used:

Front End:

- HTML
- CSS
- JavaScript
- Bootstrap

BackEnd

- NodeJS
- Python

Database

- MongoDB

Environment:

The website will function on any browser using the internet.

Application Domain:

Functional Component:

Input: User gives the details of their vehicle number and type.

Process: System checks the availability of parking slots for the given vehicle type and stores the entry time.

Output: User views the available parking slot.

Expected Outcome:

User friendly and interactive interface providing time and cost efficiency in parking with accuracy in storing user details.

Makes parking efficient and convenient