Intelligent Parking System

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Abstract- *Artificial intelligence (AI), deep learning, machine learning and neural networks represent incredibly exciting and powerful machine learning-based techniques used to solve many real-world problems. With the increase in vehicle production and world population, more and more parking spaces and facilities are required. The system detects either car parking occupancy or improper parking action. The Space recognition system includes the various process like space feature extraction and image processing.*

Keywords- python, Design with Flask, Design with HTML and CSS, Choose image, Microsoft SQL Server, SQL yog.

I. INTRODUCTION

The system detect either car parking occupancy or improper parking actions. Different detection technologies are reviewed and compared to determine the best technology for developing parking system. It includes vacant parking space detection, detection of improper parking, display of available parking spaces and different types of parking spaces like vacant,occupied through the use of specific LEDs. The system architecture defines the essential design features such as location of cameras and required numbers of camera.

Python is platform used to configure the data and it has various inbuilt libraries to perform the task which needs a single call using the object. CNN library provides the network mapping of data which feed forward the data. camera is used for image detection of empty parking spot . The first step is to acquire the system using camera. In the second step space is detected from the acquire images.

II. LITERATURE REVIEW

A. Python is a web development platform, which provides a programming model, a comprehensive software infrastructure and various services required to build up robust web applications for PC, as well as mobile devices. Python is used to produce interactive, data-driven web applications over the internet. It consists of a large number of controls and libraries such as pandas, numpy, scipy for assembling, configuring, and manipulating code to create HTML pages.

B. SQL Server is a relational database management system (RDBMS) developed and marketed by Microsoft. As a database server, the primary function of the SQL Server is to store and retrieve data used by other applications.

C. PyCharm or Anaconda is used to write native code and managed code supported by Microsoft Windows, Windows Mobile, Windows CE, .NET Framework, MAC OS, Linux.

Python libraries provide inbuilt functions to develop a code. The PyCharm integrated debugger supports both source and machine-level debugging. PyCharm includes other built-in tools, like a form designer, which is useful when building GUI applications; a Web designer that creates dynamic Web pages; a class designer that is used to create custom libraries, and a schema designer for database support.

III. STUDY FINDINGS

A. The current system forces the company add the City, Area, location of their parking area. Without add the City , Area, Location users does not know the where is the exact area of the parking. If the user does not get parking space he/she park their vehicle on road side that's why traffic will be generate.

B. help out many features collaborative within one type of the system included. So it can be helped out in new trends that many functions usable to in one web application in these new system. Different kind of a modules and phases are usable in that known as a particular of the fields.

C. Company have to register first then provide the parking area to users. It provide user- admin communication. It provide highest access of data. It provide secure accessibility. It also provide flexibility of services.

D. Every user should be comfortable for the working of the known as a basic computer and net browser. They must have basic knowledge of English Language. User have to login one time. User can select the desired person by selecting categories. User must have some knowledge of how to use any websites. They have been some create account of basic needs.

E. Admin is an entity that will manage entire system. Admin have must authorized. Admin have all rights to performing

any type of given rights to the given user because they will have highest level of access the rights. Admin have under observation of some areas like database, security, integration and management.

F.   The minimum hardware requirement is Memory of 4 GB RAM or more, Monitor resolution of 1024*768 or highest access, Intel Pentium 4 or AMD Athlon 2 GHz (or more faster), 1 GB (or more) available hard disk space.

IV. FUTURE ENHANCEMENT

The Intelligent Parking Space detection system based on image processing was designed and tested. By identify the rounded brown image drawn at each parking lot as a reference on image detection ,it makes the process of detecting image as a reference more efficient compared to the use of moving object. Additional guidance devices such as we can create a path where the car is park like which floor ,which lan ,and which lan number like that.

V. CONCLUSION

This system helps user to identify the face and recognize the data, it provides bio matric login to the system. The system is user friendly and has convenient user interface. The reliability, robustness and correctness of the system exact need more elaborate study to help the admin. The helping out maintain their accounts, data, records easily.

VI. ACKNOWEDGMENT

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