A Study of Smart Parking Software Using the Internet

Abdul Samad Khan[1], Dr. Devesh Katiyar[2],

Mr. Gaurav Goel[3],

Dr Shakuntala Mishra National Rehabilitation University Lucknow

---***--

Abstract - It's a useful and clever way of managing a good parking system, park and internet of things technology. The IoT You have access to the program and allows the user to keep monitoring of availability of a parking space.Growth in the number of cars in the city big city, heavy cars the biggest problem they face. The title of this article is:to solve this problem.The average person wastes his time and effort when searching for opportunities to take advantage of park space. Information packets are sent through the user notice. Therefore, the waiting time of the test taker to limit the park somewhere. The typical RFID technology avoid the car theft.

Keywords: RFID, Arduino, GSM module, IR sensor, ao structural data

1.Introduction

The Internet of Things (IoT) can transmit data communication without affecting human communication. Approved by IoT The user of cheap wire technology and assist for the user to

send information to the cloud. IoT helps the user compliance with the clear. The concept of IoT a is what identifies the network device vary. Nei The devices can be controlled or monitored by computer through the Internet. IoT has two key words: "Internet" and "things" in the Internet are a lot of communication connected servers by machine [1]. The Internet is allowed the information sent, received, or even communicated the tool. The problem with air parks and emergency route [4]. In today's era, it is parking they are hard to come by in everyday life. according to a recent study a Total traffic is 2035, more than 1 , 6 billion [7]. About a million pounds of the world's oil has been burned daily [4]. Therefore, it is wise to park programs most importantsolutions minimize the wasteparts of oil.

 Thesolution willcrisis to emerge. The wisdom parks in solutions to reduce human time and efficiency the total cost of fuel burned during the parks square . In this case, the information from the device and it provides direction through analysis and operation. [5]

These are the ones that will be sent to the machine, to remove the relevant information, and send the Arduino machine which brings the command line to several device at once. Arduino sends the signal to the servomotor and the GSM module, which runs give instructions and notifications to the user. As for the user   enter the parking lot, User usage is checked by the group reader ensuring the security of the user name. It can not the user to obtain information about the available parking space and send SMS to the user's mobile phone number. It consists of three parts, which

contain the first part park with Arduino machine and IR Sensors. The user and the car park and help with these tools. The second part of the article including cloud-connected websites working as consultants between the user and the parking lot. There is a cloud update depending on the parking space.

LE The Cloud Service is managed by the administrator, but it is possible. The user has seen his or her contact information. The watchman It is part of the page layout page. User is notified for access through SMS client by client GSM Module. The user it interacts with the clouds and so does the park. The user you will be notified when the parking space is full it saves time for the user.

II.RELATED WORKS

[1] Sensors used IoT-based parking smartphone systems scanacces information from remote locations with the help of the cloud, these factors increase the cloud what (COT).

Node to monitor and control from any place of the system we plan to obtain information   on available parking use of mobile application a remote locations can reserve parking space.

[2] Algorithm to increase the effectiveness of the system of parking on the cloud and use the structure of network technology is the algorithm is used to find the cheapest parking space. Evaluation the number of available and considered free space the distance of the parking space from the user. Man can you have direct access to the cloud-based server and access the park information. The customer can park information . The customer can an application on their mobile phone to accomplish this information. To use this algorithm, the latency is looking for a parking space for the user can be reduced . Safe the option is not covered in this article.[3] Save yourself node as well as the mobile application already in use get the parking space. Because wireless technology has been used now the program has high accuracy and efficiency. in this system , on the board related units and others sports car . The user parks the car in one of the others It makes space for tattoos lift the car.

III. SYSTEM ARCHITECTURE

A. Planned programs

It consists of three parts: the first part of the parking lot which includes an Arduino device and an IR sensor. LE The user uses these to interact with the parking lot tools . The user cannot enter the parking lot a The support RFID card. The second part based on the service site as a proxy between the user and parking. The cloud is renewed, the parking space. The controller controls the while service and can also be viewed by the user to check availability. The third part is the user side. It will be informed on the basis of users upon the presence of SMS via GSM module.
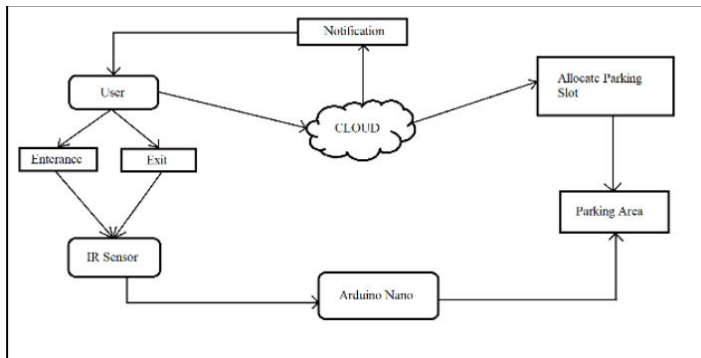
Figure 1 . Office of artists

B. Equipment

The three main leaf groups used were GMS module , RFID card, IR sensors. The user can access the park space if the person has an RFID card. RFID card contains the registrar's information. As the vehicle enter the parking lot, the module reader reads the recording RFID markers. The information is sent to Ardunio for proof The availability of a parking space and at the same The user will notify the park status via SMS area. The GSM module is the message space. The IR sensor sends signals a the presence of the vehicle.
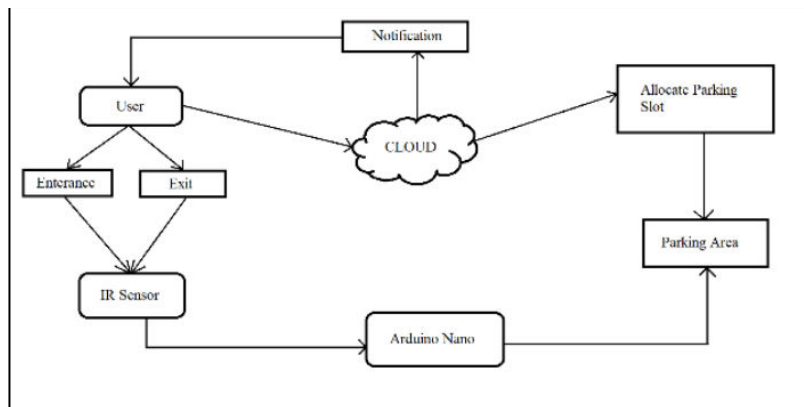

Figure 2 . Design of sculptures

C. Software

The cloud server acts as an intermediary between the modules. The cloud server is connected to the Wi-Fi module. The user walk through the SMS module while in operation The park enters and exits with an RFID card. LE message sent to the SMS Module will ao . Once the help you infrared sensor of automobile, the cloud will update from 0 to 1 with the boot time the park has been abandoned , the condition of the car has been renewed 0 to 1.
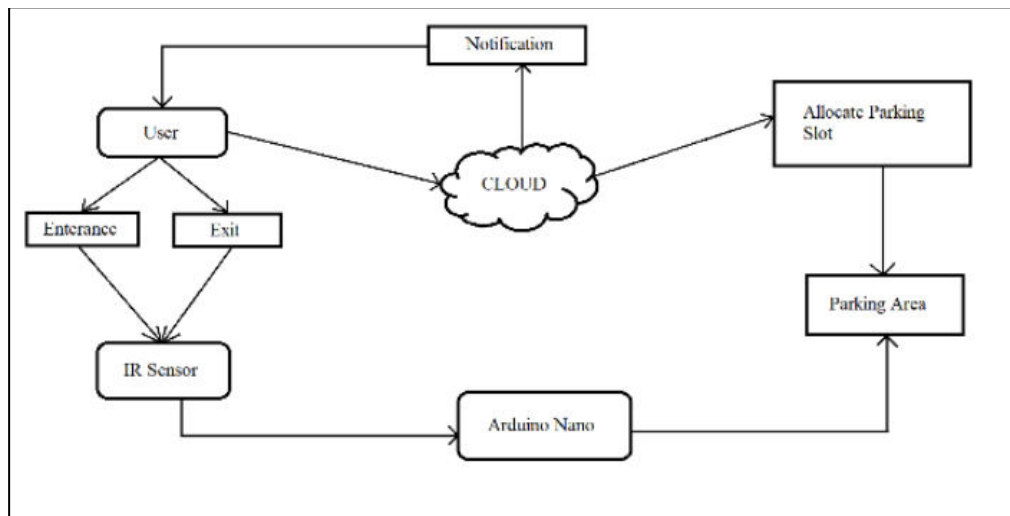
Figure 3. Scheduling software

IV. DETAILS OF THE MODULE

A. GSM module

The GSM module is a department used for configuration communication between the mobile phone and the microcontroller.

Used to send SMS, MMS and text messages mobile phone . The expansion of GPRS over GSM allows for a higher number of records layering . GSM uses large time sharing space

street advertising .

B. IR SENSOR

An infrared sensor is actually an electronic device used to indicate the existence of things . Infrared light provided by the device. If this group does not receive IR the reflected light means that the object does not exist. If the light detected by the sensor.

C. RFID paper

RFID signals include an integrated circuit (IC), a throw with an orange . This is the ID of the sign a credit card translates its contents from one to read read section. The RFID tag sends information about something by radio waves.When you install RFID tags tools can also be used for monitoring.

D. READER module

This section is a tool to read and collect RFID information card . This card can be used looking for things . As soon as the car enters the park, the user it reads the RFID card and contains all the information stored on the screen send to admin via this module.

E. Servo Motor

The automatic snap mechanism allows you to control the range and slow motion. A servo motor can be used for release and closed the door. The servo drives the electric motor signal to the servo motor to produce the action.

F. Arduino Nano

A compact disc can be used on many devices and other professions. There are a total of 22 contributions / contact tasks or 14 of them or they nini. You have flash memory about 32 or so. These badges can control your number badges as well as badges. This portion is a loaf of bread friendly wood that can easily be used anywhere.

G. WIFI module

It sends information from the program installed on the Internet Uses a URL using the HTTP POST method using the TCP / IP protocol.Espressive software developed. This is 32 microcontroller with 80 kb usage information.

V. IMPLEMENTATION

This section contains an action plans system. Each person entering the budget park includes one RFID card with user information The RFID card is checked by the component reader for information the person introduced in the module. This is the IR sensor check to see if there is a parking space available. If not, it won't free space in the parking lot fence open.

The message is sent to the user via GSM module to send a dependent message registry

opportunities and lack of parking spaces. LE The WIFI module support the system by

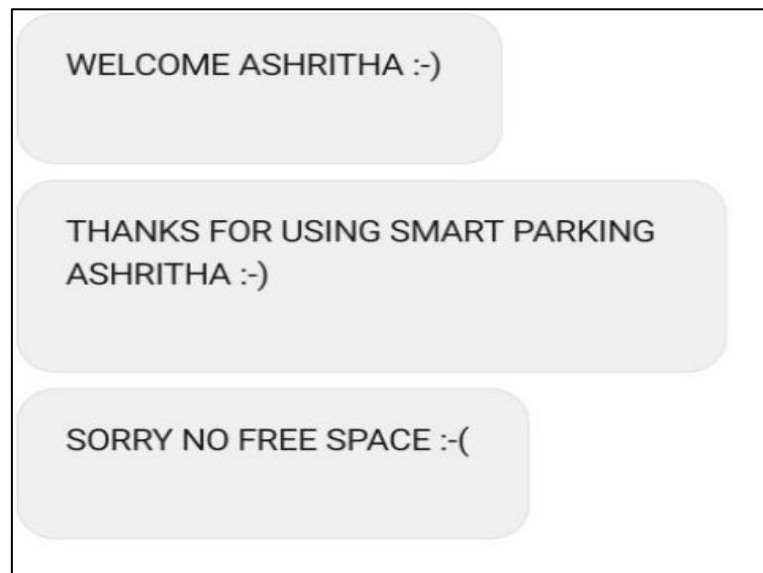storing all data the day. Connected to the device's working.

WELCOME ASHRITHA :-)

THANKS FOR USING SMART PARKING ASHRITHA :-)

SORRY NO FREE SPACE :-(

Image: Message received by the user

This is where the reader reads the RFID packet to the user. If available, the user receives the "Welcome." username " opens the bar door and the user can park the car. When the user exits the parking lot, the user leaves again to require checking of RFID and business destination people saying "thank you for using a smart park name". LE record of park rangers stored in the clouds .
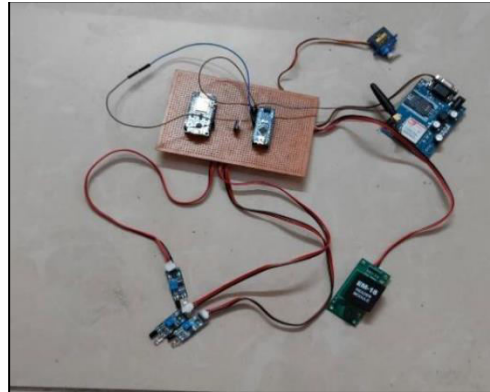

Figure 12. MODEL

The knowledgeable will know that a particular place is available at the help in cloud conditions. When parking the car, the IR sensor detects the presence of an object and updates it while the position is between 0 and 1 and when leaving the car during the day their position is reset from 1 to 0. So the user can park his car of the state of the cloud to 0. The position of the head has been renewed Uma 2 minutes.
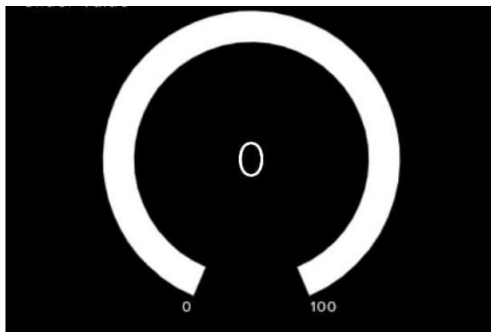

Figure 13 .CLOUD STATUS

VI. RESULT AND DISCUSSION

It requires the need for parking wisdom iloga.

This allows the user to provide real-time access to the opportunity to park. These systems do not exist, Today's world does not include parks book space and park space. LE of existing example of who has the biggest discretionary

assessment [7] to determine the total number of available parking spaces in 2005 the area by counting number of entry and exit cars require a lot of time and effort.

The current is a state-of-the-art system used ultrasonic sound waves vehicles then use two locations which used the idea of parking lots on top of one another.

By the end of the paper, the parking lot is ready communicating with the world as well as reducing time and possibilities cheap for the user.

The result of this article is reduce car theft. This paper reduces the amount of engine power the vehicle used to search the vehicle.

VII. CONCLUSION AND FUTURE WORK

The idea of smart city has always been a dream. Advanced the original work in the last couple years to make the city wise and dreams come true. LE the Internet of Things And The Development of cloud technologies Built as an opportunity for new services intelligence city.

The park wisdom has always been the main build smart cities . The program is real-time

the information processing and parking areas. This is the document improve usability while saving activity just open park. This will help overcome growth the problem of roads in cars. While working ahead is used to park at a distance helyről.GPS, They can also choose options and a license list scanner in the future.

REFERENCES

1. Abhirup Khanna, RA (2016). IoT based smart park systems. International Online Forum and Applications in Applications(Scrap) (p . 5). Pune: IEEE.

2. Deng, D. (2015). It is based on a cloud-based smart parking platform. Internet of Things technology. IEEE, 11.

3. Orrie O., BS (2015). Nice parking table. IECON (p. 1)5. Yokohama: IEEE.

4. Khaoula Hassoune, WD (2016). Quality Policy: Research.IEEE, 6.

5. Wael Alsafery, BA (2018). Smart blockchain solution the Internet of Things in smart cities. IEEE, 5.

6. Rachapol Lookmuang, KN (2018). Smart park uses the internet. Technology. IEEE, 6.

7. Mohit Patil, RS (2014). The foundation of a smart carparkReserved. International Scientific Engineering ma Research (IJSER), 6.

8. Vishwanath Y, TA (2016). Study the article in the smart car park is based on client Internet of Things. International printing in the field of engineering and research (IJRTER), 5.

9. Dr.V. Kepuska, HA (2016). Smart parking system. International International of Science and Technology, 7.

10. J. Cynthia, CB (2018). IoT-based smart park management Policy International Journal of Technology and (IJRTE), 6.