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SERVICE ROBOT FOR HOTEL MANAGEMENT

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Abstract: This project describes the design and development of Robots that should be considered as potential for solving the humanities. The robot is being replaced by manual work all over the world, coffee shops, restaurants and hotels, many people face a lot of problems due to the plentiful peak periods, problems with operation, based on the user's guide to management, these shortcomings can be eliminated by an electronic automation system called "Technical Robotics", which are used to order food, drinks, etc. The variety of menu includes an LCD display and a Wi-Fi module. When an individual is ordering through an electronic menu. Using the communication network, the order will be sent to the kitchen and reception. Delivery to the patient during meals.

Keyword*: LCD, Pathfinder, IR sensor, Obstacle Sensor, Wi-Fi module, Arduino*

I INTRODUCTION

Robots are used to serve humanity. It is this robot that plays such an important role, which is called "social robots". Social robots today's scenario, now with a human, communicate, interact and connect with the community in all areas, and understand social conditions. Based on the modernization, the International Criminal Court will implement many new models and mechanisms that are able to read people's minds and understand the steps. These robots are widely used in advertising robotics, for example, helping the wounded, sick and elderly.

These robots are adaptive, meaning they can be used in several modes, according to the scenario. There is a growing trend of using robots in the city software. These robots can greet guests and serve customers with food. The design of such robots can be effective for exploring advanced concepts of human-robot interaction, developing new models and communication protocols, and using a new architecture for direct, real-time planning and control systems. Robots can be divided into two main types. The first deals with ambient robots, and the second with autonomous robots. Remote-controlled robot, remote-controlled and controlled by a human operator, can be see and feel the environment for sensors using the robot. An autonomous robot has multiple sensors to detect events and measure how they are reported, which is then used to apply control logic

II LITERATURE REVIEW

As part of the planning process, we conducted a Literary Inquiry that presents in certain critical articles, books, and other sources, and is relevant to our field of study.

In this article, we will discuss potential problems and solutions related to waiter-robot use of Node MCU wireless firebase technology. In particular, we discuss the problem and look at modern wireless solutions that combine a robot waiter for firebase and the Internet.

1.What is robot companion friend or assistance (IEEE/RSJ International 2005-06)

For autonomous robot for home designed to elicit emotions and show instincts learning and growth abilities is often used in child robot interaction studies

2.Intelligent Robot and Systems (B.News "Robots set to get homely" 2007)

Robots in today's scenario are now communicating with human; interacting and relating to the society are called the intelligent robots.

3.Fully automated restaurant in Germany (Baggers Official Website 2013)

The restaurant, called Bagger's, eschews waiters and waitresses for gravity operated ramps that send food directly to tables.

4.Robot assistant run restaurant (FOX News 2014)

The benefits of using robots as assistance robot include the accuracy of 3 AISSMS INSTITUTE OF INFORMATIION TECHNOLOGY PUNE timing in serving ordered food.

5.Robots serve food in style at this first-of-its kind restaurant (The Hindu Times Dec 2017)

At this themed restaurant, you can order food – Chinese and Thai dishes primarily – without interacting with a waiter. An i-Pad adorns every table and an order can be made by the customer directly, which, in turn, lands on the system at the kitchen.

III PROPOSED SYSTEM

In our project, we have used NodeMCU instead of GSM because NodeMCU is basically a Wi-Fi module and operates on with the help of the internet.

The L293d module and IR sensors are connected to the nodeMCU. Then the data which is fetched by the Web application will be transferred towards the firebase. 17 AISSMS INSTITUTE OF INFORMATIION TECHNOLOGY PUNE The firebase will manage the data coming from a web page which is basically a menu of food items and sensors and send towards the display devices such as web page and android application.

IV RESULTS

Software testing result

For testing the software we uses firebase database management system. The steps of this are as follows,

Step 1: The following image shows restaurant menu on web page. For each order it will get update on firebase & order list including Table number with ordered food.

Step 2: Updated order list ordered by customers

V CONCLUSION

In this proposed system we have shown four tables and one waiter robot to serve food. The waiter robot takes approximately 3 minutes to serve food for one table and and returns to kitchen. The introduction of the waiter-bot in the markets will bring about a drastic change in the standard of our country to its neighboring countries. Not only that, but it will also get worldwide technological recognition. The use of a waiter-bot will reduce human effort and create a comfortable lifestyle for the residents. Never the less, it will ignite the vision of complete automation in the hotel industry. So also may be used in research labs, hospitals, or even at home.

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