IOT BASED MEDICAL SURVEILLANCER ROBOT

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ABSTRACT

Medical field requires enormous number of sophisticated features with robotics. However, we need to full fill anyone requirements for the medical field. On our system the purpose will be acting as surveillance-based health monitoring system for patients in the hospital. Our model includes a robotic vehicle model. On that we mounted a Biomedical data monitoring system which includes temperature sensor, blood glucose sensor, heart beat sensor. These all the sensor will monitor the health parameters of the individual patients and sense the information to the cloud and the robot module is controlled through a wireless system. Especially, through a mobile application.

1. INTRODUCTION

The field of robotics and automation, which covers a wide range of fields, has undergone a dynamic and significant transformation as a result of technology. The technique for observation is surveillance. Today, this activity is used to sense body temperature, heart rate, and blood sugar levels. Particularly, human beings are the primary target of surveillance activity. The field of robotics has seen a revolutionary transformation as a result of technology, particularly in the automation industry. Robotics are being used more and more frequently, which decreases the amount of human labour while enhancing productivity. Due to the widespread use of smartphones, everyday life has undergone significant transformation. The development of applications that can be put on any system has allowed users to use their smartphones for all tasks.

2. METHODOLOGY

Hand held Robotic Mechanism control through mobile with the medium of Bluetooth. The data will be sent to the cloud through the GPRS. This is the Internet of things based project, where we are particularly two DC motor with Robot chassis to build this Robotic system setup. It has a web camera mounted over it, through which we will get live video feed and the interesting part here is that we can control and move this robot from a web browser over the internet. As it can be controlled using webpage, means it can also be controlled by using the other smart devices where we can control through the webpage. We built a webpage in HTML which has Left, Right Forward Backward links, connecting on which we can move the robot in any direction. Here we use the term Motion for getting live Video information about used flash for sending commands from webpage to Could using python script to move the Robot. The webcam will capture live data with regards to its surroundings and then send it to a desired device through internet. The user will be observing this data on the monitor at the user end. According to the desired movement, the user will control the robotic vehicle through the webpage available at the user end.

3. MODELING AND ANALYSIS

LM35 is a precision IC temperature sensor with its output proportional to the temperature (in o C). The sensor circuitry is sealed and therefore it is not subjected to oxidation and other processes. With LM35, temperature can be measured more accurately than with a thermistor. It also possess low self heating and does not cause more than 0.1 o C temperature rise in still air. The device is used with single power supplies, or with plus and minus supplies. As the LM35 device draws only 60 µA from the supply, it has very low self-heating of less than 0.1°C in still air. The LM35 device is rated to operate over a −55°C to 150°C temperature range.

4. CONCLUSION

In this project, we implement surveillance robot for medical application with the help of this robot we know real time condition for patient without using human resources. We have successfully the working of the wireless video surveillance robot controlled using android mobile device. The robot is successfully controlled using the android application through the wireless Bluetooth technology. Even the real time video feel is successfully achieved using the Wi-Fi technology on our designed android application. As the communication is done with the help of internet so limitation of range of operation does not arise and thus we can monitor any remote areas. One can easily monitor as well as control the activity of the robotic unit. So as to provide a effective surveillance to them multiple sensors has been restored together to form a cognitive robot system which will be able to receive and transmit data and simultaneously predict the data such as geographical information and sensor data including atmospheric condition temperature sensor detection access the real time information simultaneously with the command doctor access the

mobile device using IoT. Since the IoT has been used, the data will be shared at both ends such that making life reliable. Instead of using GSM we can use LORA for long range communication.

5. REFERENCES

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