

The improvement of internet of thing (iot) in the health care system

[Technology](#), [Internet](#)



INTRODUCTION

Introduction to Project

The most recent few decades have witnessed a gradual increase in lifetime in many components of the globe resulting to a sharp rise inside the range of old individuals. A recent report from global organisation predicated that there will be pair of billion (22% of the global population) older individuals by a pair 2050. In addition, analysis indicates that regarding 89% of the aged people are interested to live individually. However, medical research surveys found that regarding 80% of the age individuals older than sixty five percent suffers from a minimum of one chronic unwellness causing many aged people to have issue in taking care of themselves. Consequently, providing an honest quality of life for aged individuals has become a significant social challenge at that moment. The speedy proliferation of data and communication technologies is sanctionative innovative care solutions and tools that show promise in addressing the pervious challenges.

Now, Internet of Thing (IoT) has become one in all the most powerful communication paradigms of the 21th century in the IoT atmosphere, all objects in our lifestyle become part of the web due to their communication and computing capabilities (including micro controller, transceivers for digital communication) IoT extends the conception of the web and makes it additional pervasive IoT permits seamless interactions among differing kinds of devices akin to medical sensing elements, monitoring cameras, home appliances. Because of that reason IoT has become additional productive in many areas such as care system in care system. In care system, IoT involves

many styles of low cost sensors (wearable, implanted and environment) that change aged individuals to fancy fashionable medical healthcare services anyplace, any time. Besides, it additionally greatly improves aged peoples quality of life.

The body sensing element network (BSN) technology is one in all the foremost imperative technologies employed in IOT based system. It is primarily a group of low-power and light weight wireless sensing element nodes that are used to monitor the functioning of the human body and environment. Since BSN nodes will gather the sensitive data and will operate in hostile environment. Consequently they need strict security mechanisms. At present situation the health issues are increasing day-by-day at a high rate. The death rate of fifty five millions individuals are dying every year or 151, 600 individuals are dying on a daily basis may be a massive issue for everywhere the globe. Hence it is the requirement of hour to beat such issues. The proposed system contains the modification in wireless sensors technology which includes the different wireless sensors to receive data with various physical structure temperatures, heartbeat, saline level, the specified medicine prescribed by the doctor at a particular time is sent as a message etc that may be transmitted on an IoT platform that is accessible by the users via web.

Accessible information is made concerning patients health can be monitored at any time if necessary, the information storage is saved on the server permanently or it can be resent via the software. This project propose the observance of the system that is capable of detection of the heartbeat rate,

temperature, saline level monitoring and the specified medicines prescribed by the doctor at a particular time is sent as a SMS by using the GSM module. The transmission of the data will be saved on the IoT server doctor can access the data anywhere from the world. In case of emergency or any kind of unknown activity is detected the information is forward to the doctor or to predefined mobile number an alert SMS can be sent.

Moreover, new generation mobile phone technologies and their services provides a crucial impact on the network varieties like Bluetooth, 3G, wireless networks etc. Varieties of sensors are implemented ECG sensor for monitoring the heartbeat rate, LM35 temperature sensor is employed to measure the surface temperature of skin. The health monitoring system uses IoT. The IoT is nothing but an advanced concept of the ICT (Information communication technology). IoT is the interconnecting of devices and services that reduces human intervention to measure the human robust life. This project is showing advancement in the health monitoring system technology. It will save the patients from the long run health issues that may arises and that would also helps the doctor to take appropriate measures regarding patient's health at proper time.

LITERATURE REVIEW AND EXISTING SYSTEM

Literature Review

Body sensor network (BSN) is the essential technology for the improvement of IOT in the health care system. In which a sick person can be examined by using different type of light nodes and wireless sensor hubs. However the improvement of this health care system without respect to safety makes the

security of the patient vulnerable. In this article there firstly focused on the major safety requirement in the modern health care BSN. This method can be used to examine physiology parameters. Such as the heart beat rate and temperature of the human body. The gadget detects if the patient is in disorder state to the doctor and receiver connected to the computer diagram chart for monitoring physiological specification of the human body.

Many researchers did their work on health monitoring using IOT. M. Wcislik et al monitors patient's body temperature, pulse rate, heart beat rate and patient's body position using the ARM. The sensor used are temperature sensor, heart beat sensor, MEMS accelerometer and to check the saline bottle level monitoring. These sensors are arranged on the surface of the patient body which is used to monitor the health of the patient without disturbing the daily schedule of the person . The information will be send to the server of physician server with long range wireless system using GSM. The health monitoring system contains the microcontroller, sensors, GSM modem and LCD display to transmit and receive health related issues to the doctor server.

The purpose of the Body sensor network (BSN) is to make simple and the better speed, accuracy and reliability of sensors communication within, inside or in the region of the body. The enormous sum of the challenges identified with the wireless body sensor nodes (WBSN) as resulted in many of the publications. In this project we create the web page. Using the IP address anyone can monitor the patient's health monitoring status from anywhere in the world.

Existing System

The Existing system provides a few popular researchers. Code Blue [4], [5] is well apprehend attention research supported the BSN care improved at the Harvard sensing element network during this design some sensors are arranged on the surface of the patients body. These sensors can sense the information and forward the data to the wirelessly end-user device for the future analysis. The aim of the Code Blue is that doctor concern a query for the data using the digital assistant. However, the code blue author acknowledges the requirement of safety in medical application but the security is still a major problem in this article. Alarm-net consists of the sensor node and the environmental sensor node.

The improvement in the body sensor network has made the health care application had made the patient health monitoring more easy. Recently many researchers have been proposed in which it provides the continuous health monitoring. The aim of the project was to issue the recognized by the utilization of the implantable and wearable sensors for the allotted mobile monitoring. In spite of Ng et al proposed and exhibited the health care monitoring; it is generally acknowledged that without recognizing the security for wireless monitoring which may be fundamental requirement of health care application as stated as legislature law.

Proposed System

In this project we are using LPC2148 microcontroller has a gateway to communicate with the sensors like Temperature sensor, heart beat sensor, MEMS accelerometer and also for monitoring the saline bottle level

monitoring and if the sensors are in abnormal condition then it will send the SMS alert to a particular mobile number. The sensor data will be sent to the web page by using the internet of thing. The information will be implemented by the system and doctor can be accessible anywhere from the world through the internet and also send SMS alert by using the GSM module. The specified prescribed by the doctor at a particular time is sent as a SMS.

System Design Architecture

The security issues can be addressed by setting a password the client can easily open the web page and can know the information in the emergency situation the data can be forwarded as SMS alert to the predefined mobile number through GSM modem. The information will be updated to the webpage through internet. The proposed system includes the heart beat sensor for monitoring the heart beat rate, temperature sensor, MEMS accelerometer and saline bottle level. The data will be updated to the web page and can be accessible from anywhere in the world through internet and if any sensor gets abnormal condition then it will send the SMS alert to the predefined mobile number.