



DT BASED INTERNET OF THINGS HEALTH MONITORING SYSTEM

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ABSTRACT:

With the discovery of the new corona virus, each nation now places a high priority on healthcare. So in this regard, the ideal response to such an epidemic is an IoT-based health monitoring system. The Internet of Things (IoT) is the latest internet revolution and a rapidly expanding field of study, particularly in the field of health care. The usage of wearable sensors and smartphones has increased, which has accelerated the development of remote health care monitoring. IoT health monitoring makes it possible to diagnose a patient's condition accurately even

when a doctor is a long way away. It also helps to stop the spread of disease.

Empathy: This technique is employed to keep track of the patients' bodily behaviour. In o Even when a doctor is far away, IoT health monitoring makes it possible to diagnose a patient's condition

accurately and stop the spread of disease. The system that is being proposed makes use of a temperature sensor as well as a heartbeat sensor. The proposed system will seek to meet the needs of those patients who require it. Some patients may require ongoing care and support from medical professionals, while others may not. It can keep an eye on a person's temperature, blood pressure, heart rate, and level of oxygen. Many patient deaths can be prevented by following procedures like taking patients' temperatures and heart rates, storing the data, connecting with the receiver end, and then immediately starting treatment. It is capable of monitoring blood pressure, heart rate, oxygen level, and temperature of a person. Processes like recording the temperature and heart beat of the patients, storing of the data, connecting with the receiver end and finally providing immediate treatment will help to avoid deaths of many patients These sensors mainly involve monitoring the condition of the patient.

Keyword: Cloud platform; Health monitoring; IoT; Raspberry Pi; Sensor interfacing

I. INTRODUCTION

Convalescents today have a wide range of medical conditions, therefore we created this technique to help us identify them more precisely. Physical limitations like body temperature and heart rate are crucial indications of human health, as demonstrated by the recent corona epidemic, which to some extent has severely damaged the economies of several nations. We can determine the patient's condition by keeping an eye on such metrics. A smart sensor network is part of the planned IoT-based system in use to find crucial human signals. In addition to being utilized for individuals, a patient health monitoring system is also used in everyday life. The Internet of Things (IoT) is built on a patient health monitoring system and it is the current solution identification of various diseases in the humans.

These days, only a few industries use wireless technology for system detection, and hospitals are continually making advancements in the semiconductor technology area that make their products operate efficiently and are reasonably priced. Individual statuses including heart attack, chronic fever, care and support for the elderly, preventive rate, and excellent health are monitored by an IoT-employed user monitoring system. And it is affordable in cost. With an IoT-employed user monitoring system individual status such as heart attack, chronic fever, elderly care and support, prevention rate and good health.

DEFINE:

The primary goal of this project is to accurately diagnose a person's specific diseases with the help of the internet of things, which can link with the n-number of necessary devices. In addition to healthcare, we can also use this concept in a variety of other fields agriculture. The primary goal of this project is to accurately diagnose a certain ailment in a person using the internet of things, which is able to connect with the n number of

devices needed for this project. Not only is this concept applied in healthcare, but we can also apply it to a variety of industries.

IDEATE :

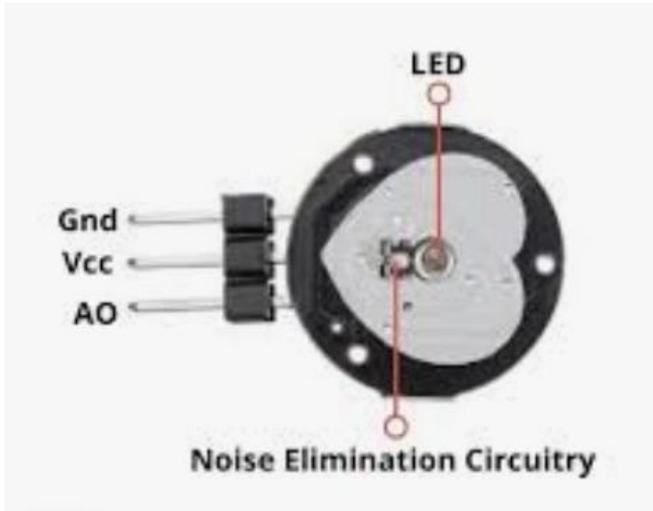
The goal of this project is to provide precise findings based on patient health as monitored by various system components.

LITERATURE REVIE

One of the most popular ways to keep an eye on someone is to use sensors and other gadgets that can sense their health and record the information using an appropriate microprocessor. Cloud computing and the Internet of Things (IoT) are essential components of the current telemonitoring health system. Nothing will be done correctly in the modern world without the Internet of Things. Through the use of a Raspberry Pi board for the collection of body sensor data, this system monitors the physiological parameters of the patient. Doctors create the patient's health card, which is then shown on an LCD screen so that both patients and doctors can access it and speak with one another virtually. The data can be updated, saved, and retrieved using cloud computing from any location in the world. It is very suitable for rural areas where medical facilities are not available.

PREVIOUS WORK OF THE PAPER

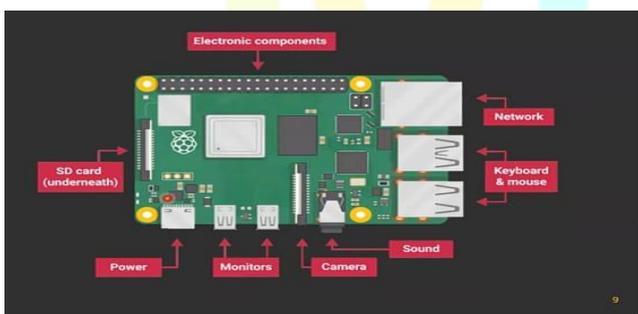
In hospitals, it is impossible for the doctors or nurses to continuously watch the patients because they must be physically there. Before the doctor visits for a checkup, it is unknown how critical the patient's condition is. Looking up for all the patients to go on rounds might be more stressful for both doctors and nurses. Patients might not have been able to hit the emergency button to signal their level of difficulty if they had become unconscious. Previously, they had utilized a keyboard to input data into a Raspberry Pi 2 CPU. The Raspberry Pi is a microprocessor that uses a



III.FUNCTIONS : The Raspberry Pi-specific Python Library is responsible for diagnosing the condition. We are uploading a variety of patient data bases. We must send the data to a cloud service after storing a database on a raspberry pi. We can restore the data from the cloud service whenever it is required. We require protocols like IFTTT, MQTT, etc. for deep processing. The activity is carried out using IOT-based cloud applications like Thingspeak and IFTTT.

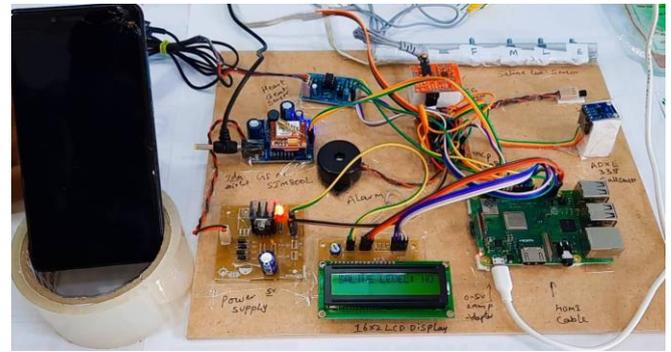
The data will be kept in Firebase, and it will be delivered to project-related components like the Raspberry Pi. A tool that helps expand businesses, both small and large, is called a fire base. Firebase, which keeps a person's real-time database and sends information to a component that can more easily or precisely detect.

IV. PROTOTYPE :



With the help of this components this project as been created.

V. TESTING :



Finally, we were able to get this result from the Raspberry Pi. This project makes use of numerous sensors. "Just Perfect" describes the temperature. And when the temperature is greater, it says "it is hot"; when the temperature is lower, it says "it is chilly."

I. CONCLUSION

Our technology uses temperature and heartbeat sensors to detect a person's health and provides results that are up to 95% accurate. Thus, the proposed system functions to continuously monitor the patient and give them quick therapy when necessary, overcoming some of the drawbacks of the current approach. In the future, we will be able to use a variety of sensors, particularly cutting-edge ones like accelerometers, phonocardio graphs, piezoresistive or piezoelectric sensors for respiration rate detection. Using an Arduino and an ESP module, we can add a GPS module to the IOT-based health monitoring system.

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