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Health Monitoring System Using Iot: A Review

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ABSTRACT: The advancement of the Internet of things(IOT) technology plays a major role in developing the health sector by making it much more reachable and desirable.The integration of IOT –cloud can play a vital purpose in the smart healthcare by offering deep understanding the healthcare content to support inexpensive and standard person care. Hence the combination of IOT and cloud helps in the betterment of qualityof patient health care on a regular base integrated,processed the patient data. Our system is simple,low-cost and compact. This projects design and development of cost effective and reliable wireless sensing device which is based on Ardunio for collecting real- time health vital signs such as human body temperature, Respiration, heart beat rate. It helps in online diagnosis and manages health more efficiently, without the going out of the home.

Keywords: Sensors,ESP32,Ardunio,cloud,LCD, GPS,GSM.

INTRODUCTION:

Health is the most fundamental element in our human life. Maintaining a proper health of human being is necessary. It is a full state of physical, mental & social wellbeing& not merely a lack of illness. But we maintain a proper good health, unfortunately most of the people face many health problems and cause to death because of poor health services, presence of large gaps between rural and urban areas and also the unavailability of nurses and doctors due to increasing of patients in hospitals.

To maintaina proper good health services. We need to set up any system based on health management. Now-a-days IOT is a popular technology and it is used for many applicationslike agriculture, automation, smartcities, transportation etc.

In this we use IOT as health care management which provide health and environment condition tracking facilities. IOT is nothing but connecting the components or linking components to the internet utilizing sensors and networks. These connected components can be used on the devices for health monitoring. The used sensors then forward the information to the distance location. It is simple, energy efficient, much smarter way of tracking and optimizing cause to any health problem. To maintain patient's information local servicer and communication process is implemented, when the patients under the observation of any health care department.

Mostly the patients are under the observation in the situation of post-operative cases. In the post-operative cases we need to monitor the basic signs(vital conditions) of the patients and they are designed to obtain basic indicator of patients health state and that information is send to the medical staff and also toone of the family member. If the vital sign of the patient are inpropercondition, hospitalization takes the decision whether the patient is discharge or not. If any sudden changes or improper vital sign of the patient, the doctor can go and check the patient immediately by the message.

LITERATURE SURVEY:

[1]Tele-monitoring health system is becoming advanced day by day. Cloud computing and Internet of things plays a vital role in it. In this system we use Raspberry Pi along with several body sensors to track patients physiological parameters. Here doctors and patients can able to communicate with each other through the web page in which the patients health card which is developed by the doctors is displayed in this way the patient and doctor can able to communicate with each other without having any physical presence. We can store, update and access the data from anywhere in the world by using the cloud computing. In rural areas where the medical facilities are not available this system makes a great impact on it.

[2]The wireless network improves with the IOT approach in the health analogy. In 2012 Tan et.al used the Wi-Fi technology to relay messages on different body functionality such as oxygen saturation, pulse rate and blood pressure. Malekianc introduced bluetooth into the smart phone to track the patients

[3]Using IoT for soldiers, Niket Patil et.al worked on the fitness monitoring and apprehending system. Monitoring using the sensors like Oxygen sputtering system,pulse rate sensor and LM35 for tracking and SIM28M,GPS to track soldier's location is proposed by Patil. Internet using Node MCU ESP8266 Wi-Fi module is connected to the system in order to indicate the emergency condition a panic button is also introduced on it. This is a low cost system and AT Mega 328 is connected with sensors.

[4]An IOT based system is proposed by Boyiet.al. to provide support at the emergency conditions . It demonstrates how the data can be collected using IOT. The necessary detail of the software for healthcare is discussed by Long et.al. ECG, blood oxygen, temperature and respiration are the parameters taken by him.

[5]For real time health monitoring an efficient sensor based diagnosis is proposed to assist the hospital and medical staff. To avoid the repeated collision the sensor nodes are failed. But however the device was failed to control the sensing frequency at different periods

Future work: Develop an application that automatically suggests medicine to the patients when doctor is unavailable.

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REFERENCES:

[1]. S. Jaiswal, R. Katake, B. Kute, S. Ranjane, and P. D. Mehetre, "Survey of Health MonitoringManagement Using Internet of Things (IOT)," Int. J.Sci. Res., vol. 5, no. 11, pp. 2243–2246, 2017.

[2]. Tan, S.L., Garcia Guzman, J., & Villa-Lopez, F.H., "A wireless body area network for pervasive health monitoring within smart environments", In Consumer Electronics- Berlin (ICCE-Berlin), 2012 IEEE International Conference on(pp.47-51). IEEE, 2012.

[3]. N Patil,B Iyer. Health monitoring and tracking system for soldiers using Internet of Things(IoT), International Conference on Computing, Communication and Automation (ICCCA), GreaterNoida, 2017, 1347-1352.doi: 10.1109/CCAA.2017.8230007.

[4]. Boyi Xu, Li Da Xu, , Hongming Cai, Cheng Xie, Jingyuan Hu, and Fenglin Bu, Ubiquitous Data Accessing Method in IoT-Based Information System for Emergency MedicalServices, IEEE Transactions on Industrial Informat- ics, Vol. 10, No. 2, May 2014.

[5]. Hassan Harb, Ali Mansour, Abbass Nasser, Eduardo Motta Cruz and Isabel de la Torre Diez, "Sensor-Based Data Analytics for Patient Monitoring in Connected Healthcare Applications", IEEE SensorsJournal, Volume 21, Issue 2, January 2021, Pages 1-10.

[6]. Y. Zhang, H. Liu, X. Su, P. Jiang, and D. Wei, "Remote Mobile Health Monitoring System Based on Smart Phone and Browser/Server Structure," Healthc. Eng., vol. 6, no. 4, pp. 717–738, 2015.