RESEARCH ARTICLE OPEN ACCESS

A SURVEY ON AUTONOMOUS RC HOSPITAL SMART BED FOR ACCIDENT PATIENTS USING IOT

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Abstract:

Nowadays, Internet of Things is a technology that is used to invent many new devices, and also used to connect with the existing device to make the process of working more simpler and easier. A sensible smart hospital with a smart bed trend giving helpful tools that will work with the beds. Innovations are giving the business a lift. One major focus of "smart bed" advances in raising patient safety and luxury throughout a probably prolonged keep within the hospital. The survey is taken to consider the patient safety has perpetually been a spotlight, the reasonable Care Act has considered patient satisfaction and luxury even additional vital. The smart beds have a detector, which is placed beneath the pad, to examine the patient's conditions. There is no smart bed or technology which is considered for emergency patients such as accident patients where they are should be treated quickly in our busy daily life. In this survey an idea of smart bed is introduced where the patients can be treated immediately and prevents any serious issues. The project aims to develop a "smart bed" for accident patients using IoT with a low cost.

***Keywords*— Smart Bed, Internet Of Things(IOT),hospital.**

I. INTRODUCTION

The Internet of Things might be an arrangement of interconnected processing gadgets, mechanical and computerized machines that area unit given distinctive identifiers (UIDs) and also the ability to transfer information over a network while not requiring any interaction by human-to-human or human-to-computer interaction. An application of the Internet of Things for medical and health connected functions, information assortment, and analysis for analysis, and watching. The Smart Healthcare is additionally referred to as that crystal rectifier in the creation of a digitized aid system and conjointly helps to connect the medical market resources and aid services. Internet of Things devices is often usual for modifying automatic health monitoring and emergency notification systems. Smart hospital beds could be best in keeping track of the patient and monitor the patient's conditions and contains sensors like temperature, heartbeat, blood, gas and pressure sensors others. All of those signals square measure needed and necessary for the doctors to know the health of the patients. This technique is found within the hospital beds and transfers all patient conditions.

This crucial info is shipped to the central system of the hospital and allows health supervisors to review and monitor the patient's vital organs. Additionally, this technique sends alert messages or signals to the supervisors just in case of any slight changes in the patient's health. Smart beds have offered the best solution for health care suppliers to perpetually monitor patients to produce higher care to the patients. In the market of smart hospital beds is in the rising stage and is anticipated to form control within the medical devices with the rise of its exploitation. However, high prices of the beds have restricted the adoption of good beds and pose as a serious restraint within the growth of this market that's why a good bed has not been fully grown within the field of medical.

"Internet of Things for Smart Healthcare: Technologies, Challenges, and Opportunities

Stephanie" by B. Bakerstatus[10]et,al., that the Standardization may be a key issue restricting advancement during this space, thus this paper proposes a customary model for 3 application in future IoT tending frameworks and to disentangle this a Cloud innovation and IOT innovation is utilized.

In "Design of Embedded System in Telemedicine using ARM-7"[9] the issue tended to here is that by and large patients are discharged from medical clinic yet at the same time they may get tainted with another Disease, there might be an abrupt assault to stay away from this they have actualized a multi-parameter screen utilizing Android Smartphone innovation and along these lines this framework can be integral asset for specialists and attendant.

Prosanta Gope has used web of things technology to supply a secure IoT primarily based attention system exploitation BSN, known as BSNCare, which might be with efficiency accomplish numerous security needs of the BSN primarily based attention system.[5][6] KUO-HUI YEH has provided security by 2 authentication processes area unit planned to satisfy major security needs .It's difficult to store more number of data in healthcare system so using cloud technology a health cloud platform is created with a driver for healthcare transformation to store the data [7].

Tomoya Tanaka there is no proper monitoring system in healthcare and they have developed a button system which is used to monitor the healthcare. In this the data can be data can be transferred through the host system. [2][3] The data can be received through only GSM network.in [4] AWTESA data transmission limited to network converge area.

II. RELATED WORK

YounsunKim [11] et, al. the main idea in this is to execute a smartphone by combine with home IoT gadgets that square measures associated with an information system for the vehicle, a smartphone-based tongue interface information input gadget and cloud-based home IoT gadget for the home and by utilizing a drug Technology Keil C. The framework gives a correspondence channel between the clients and in this manner the virtual individual aide utilizing a homogenous voice-based common language interface, each inside the vehicle and gathering.

"Smart Hospitals using Internet of Things (IoT)" K. Jaisree .et al [12] have a combination of sensor innovation and IoT. Using these techniques one can control power gears and screen the level of the medication from an outside spot and screen the whole strategy. They can also be constrained by using site page and furthermore versatile application it does not need any manual on and off switch.

In this paper Chesti. Altaff Hussian K et al [13] the Internet of things can restore the health for compelling patient perception at the decreased worth and furthermore, it becomes less payment between patient results and affliction the board by exploitation medical specialty technology Python. Measurable edges for medical gadgets grasp lessens facility visits, decrease in bed long periods of consideration and length of remains in clinics. Misuse the IoT, persistent conditions square measure got and kept them for more examination.

In this paper Haibin Zhang et al [14] configuration to connect smart things in great clinics upheld Narrowband Internet of Things and acquaints edge processing with deal with the need of inertness in therapeutic strategy. the machine circumstances and attributes of therapeutic Internet of Things gadgets in great clinics, at that point, anticipated an engineering exploitation Narrowband - Internet of Things and to beat the dormancy balanced processing are utilized finished the multi-organize joining inside the observation layer of Internet of Things. The various wireless sensor networks will be associated with correspondence to fathom the multi-organize combination inside the discernment layer of Internet of Things and this is done exploitation the Internet of Things and wireless device network.

YEAR	TITLE	AUTHOR	PROBLEM ADDRESSED	TECHNOLOGY & SOFTWARE	LIMITATIONS	CONCLUSION
2009	Body Temperature and Electrocardiogram Monitoring Using an SMS-Based Telemedicine System	Ashraf A Tahat	The problem is to develop a Cellular administration by trading Short Messaging Service messages with the remote cell phone.	Global System for Mobile	GSM is not efficient as 2g GSM Cellular system	An ease versatile patient observing framework that uses Short Messaging Service was structured, created, and tried
2011	Wearable Health Monitoring System and its Applications	Tomoya Tanaka, Koji Sonoda, Sayaka Okochi.	This paper addressed that there is no proper monitoring system in healthcare.	Wireless Sensor Network	Data is transmitted to the host computer	The button system is developed which is used to monitor in healthcare system.
2012	An Embedded, GSM based, Multiparameter, Realtime Patient Monitoring System and Control –An Implementation for ICU Patients	Nitin P. Jain Preeti N. Jain Trupti P. Agarkar	To dodge the continuous doctor visit to screen the wellbeing status of patients.	Wireless, GSM network.	The data can be received only through GSM network	It is the advantageous procedure to screen the patient's wellbeing conditions from any separation and it decreases the incessant visit of doctor.
2015	Advanced Wireless Telemedicine application using Embedded Sensor and Android OS	Padmashree T, Dr.N.K.Cauvery, Smitha G R	The issues tended to is numerous patients who have experienced significant medical procedures/treatments require consistent checking of their wellbeing parameters, for example, body temperature, beat rate.	Telemedicine, wireless, embedded sensors, android	AWTESA data transmission limited to network converge area.	A tolerant wellbeing observing framework are wired and requires a PC to process the information further and after that sends a caution to a specialist.
2015	BSN-Care: A Secure IoT-based Modern Healthcare System Using Body Sensor Network	Prosanta Gope, Tzonelih Hwang	The issues tended to is that mature age individuals experience the ill effects of in any event one constant ailment and its hard to give protection to the information.	BSN,IoT.	Security and Privacy are not efficient.	A secured IoT based social insurance frame using BSN call BSN-Care, which be able to be adequately Achieve different security necessities of the BSN based Social insurance framework.

2016	A Secure IoT-Based Healthcare System With Body Sensor Networks	KUO-HUI YEH	The issue tended is that it is Challenging to provide security in the healthcare system.	BSN, IoT, Security.	It can be even more efficient by using SHA-2 techniques.	A secure healthcare scheme for IoT-Oriented BSN infrastructures in which two confirmation process are proposed to satisfy main Security requirements.
2016	Health Cloud: An Enabler for Healthcare Transformation	Ajay Mohindra, Daniel M. Dias, Hui Lei	The issue tended is that it is difficult to store much data in the healthcare system.	cloud	It doesn't provide high performance solutions and bandwidth towards data.	The wellbeing cloud stage as a driver for medicinal services changes to store the information.
2016	Design and development of low investment smart hospital using internet of things through innovative approaches	Patan Rizwan, Rajasekhara Babu M, Suresh K	This paper tends to creative specialized help for the advancement of shrewd clinics with low speculation	Internet of things	The information can be executed as a significant viewpoint of the system	The highlights in their medical clinics it is reduction the hold up time, improve feature Also, care transportation of the patients.
2016	Design of Embedded System in Telemedicine using ARM-7	Mr. Satish L. Mapari, Ms. S. P. Kharde	This paper tends to many cases patients are recovered and returned to home from the hospital. Yet still he may get tainted with another Disease, there might be an abrupt assault that may cause his passing.	Android Smartphone	It doesn't allow the doctors to view medical parameter remotely.	By identifying the multi-parameter of the body and store them into web-database which acts as a powerful tool for doctors and nurses.
2017	Internet of Things for Smart Healthcare: Technologies, Challenges, and Opportunities	Stephanie B. Baker , Wei Xiang, And Ian Atkinson	This paper tends to Standardization is a key subject preventive development in this area, and therefore this paper propose a normal model For application in hope IoT healthcare systems.	Cloud technology, IOT technology.	The IOT based healthcare system can be done using machine learning in future work	They contain planned a unique model for upcoming IoT-based healthcare system, which can be practical to both General system and systems to observe specific conditions.

In this paper Yuanjun Wu et,al.[15], the association between the different gadget systems bolstered the occasion of oneself sorting out repetition cell engineering remote sensor organize a convention of the remote gadget topology ought to be figured it out. Through this aging method, the system can be starting of all isolated into polygon topology system structures per the area of hubs, at that point the neighbor hub table is judged and adjusted by accumulation of different system hubs and conjointly the system name are included, so that including a few WSNs are associated for correspondence to finish the multi-system and they have likewise dissected the security of the system IOT.

CONCLUSION

A delay in attending the patient's injury can affect their life. Using the survey and the technologies such as IoT the researches can develop a smart bed for the accident patients. The smart bed must be capable of help the patients by attending them and rescue. Though the existing system has a lot of remedies to help paralyzed patients. This proposed system helps to take a serious action over the patient this makes the process of recovery the patients health in an efficient way.

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