Date	20 September 2022
Team ID	PNT2022TMID39437
Project Name	Personal Assistance for Person Who are Self Reliant
Maximum Marks	4 Marks

Literature Survey

INTRODUCTION:

In modern society, busy life has made people forget many things in day to day life. The elderly people and the people victims of chronicle diseases who need to take the medicines timely without missing are suffering from dementia, which is forgetting things in their daily routine. Considering this situation study has been done in this. Paper reviewing the technologies of home health care which are currently used for improving this situation by reminding the scheduled of medicine, remote monitoring and update new medicine data of patients, which can be done by prescriber through web.

Most of the time due to number of work for the people as well as regarding age and some disease which leads to forget the basic things among daily routine. If the patient sufferings from the disease where it is compulsory to take medicine at proper time, in this paper we have review the technology of home health care system among them a medicine reminder system and some improvement regarding authentication have well focused. Generally for home based health care the arrangement include communications, imaging, sensing and human computer interaction technologies embattled at diagnosis, treatment and monitoring patients without disturbing the quality of lifestyle. It can be possible the development of a low cost medical sensing, communication and analytics device that is real-time monitoring internet allowed patients physical conditions. Internet of Things (IoT) network will provide active and real-time appointment of patient, hospitals, caretaker and doctors apart from this the secured data transmission from source point to destination for the purpose of remote monitoring there is need of the architecture of a low cost embedded platform for Web-based monitoring. The distant monitoring is made possible by using various biomedical devices, they measure and transmit data via Bluetooth or ZigBee to a unit that manages them (PC, iTV). The collected information may be stored on the device or sent to a collection centre that provides a complete monitoring, for both health professionals and patients. Access to the medical centre can be allowed, via web, from mobile device or PC 2

1.**Medicine Reminder and Monitoring System**

YEAR : 11-12 December 2015

AUTHOR: Samir V.Zanjal, Girish. R. Talmale

lkko et al4proposed UbiPILL A Medicine Dose Controller of Ubiquitous Home Environment (2009), Home automation and wireless sensor network which have enhancing the quality of life by providing security, information and comfort. Here had discuss a centric home server with three main roles: use of existing Interfaces on registered systems for remote monitoring and Control, serving the surrounding system as a data gateway and Providing content adaptive user interfaces enhanced by Belongings of end-user client devices, the ubipill device had implemented to remind people for elder and for monitoring purposes ubipill and home server have been design to reliably monitor the medicine box activity by web browser.

Kliem et al5 proposed Security and communication architecture for networked medical devices in mobility-aware eHealth environments (2012), Telemedicine concept is cost efficient and location autonomous monitoring system, the suitable and secured medical data can be transferred with different devices with attention towards security and privacy issue. Emergency situations need on the flutter network integration and data transmission fluctuating from domains like patients home, medical practices, ambulances and, hospitals, where each domain may parallel to a different authority so, mobility aware approach allowing out of the box medical device integration and authentication, and simultaneously fulfilling the typical security and privacy requirements of e-health environments.

Parida et al3proposed Application of RFID Technology for In-House Drug Management System (2012), RFID based technology have used to make drug management system, in this tracking of medicine can be done including emergency or regular medicine with or without RFID tag .the HF tag have assigning the user and by employing RFID reader along with camera and web based system to track the user. This system can be beneficial for the old age, less educated people. Clifton et al2 A Self-powering Wireless Environment Monitoring System Using Soil Energy, proposed A large-scale clinical validation of an integrated monitoring system in the emergency department(2013),In the integrated patient monitoring which include electronic patient data which generally have more amount challenges to acquire cope with artefact data with the help of algorithm, analyzing and communicating the resultant data for reporting to clinician, here in this demonstrated the machine learning technology embedded within healthcare information system which provide clinical benefits for improving patient outcomes in busy environments.

2.Smart IOT Based Health Care Monitoring

YEAR : 10 January 2021,

AUTHOR: Annamalai.M, Dr. X. Mary Jesintha, Dr.M.Nithya

Many medical errors occur because people are in charge of patients or elderly medications by handling large amounts of medications every day. This work consists of designing and establishing a pillbox prototype intended to address this shortcoming in medical areas. It can be used separately from the medication itself and other advanced features provided with this device by the hospital or retirement home. This medication pack aims to take most medications or vitamin supplements or stimulants that deal with oversalting or over-the-counter patients. The proposed smart pillbox contains a program that enables medical caregivers or clients to determine the pill size and timing of pills and service routine each day. In this research work, the Augmented Data Recognition (ADR) algorithm is also used to monitor humans' health conditions. Initially, the UCI dataset is used for training and validation of the proposed ADR algorithm. The heart rate, blood pressure and temperature of the patient have carried during the testing phase via the Internet of Things (IoT) setup. The testing phase estimates any abnormalities in the health status based on the information obtained by the sensor collected by the population structure. Statistical analysis is based on data obtained from a cumulative cloud from IoT devices to estimate percentage accuracy. Keywords: Medication pill, Augmented Data Recognition, Internet of Things, UCI dataset

Some important work in medical science has been done using IoT to monitor patient health. The work in this area is as follows. Various strategies exist to invasively and noninvasively overview the heart rate and inward warmth level. Noninvasive procedures have demonstrated accurate and supportive outcomes for the customers [7], [8]. It is also said to work with health patients [9] to give extraordinary room conditions. A couple of estimates such as room humidity and the level of all gases such as CO and CO2 can be chosen ideas inroom. Toxic gases and certain humidity levels are particularly harmful to patients [10], [11], so it’s necessary to monitor. The room humidity should be someplace in the scope of 30 and 65% for ideal help. A couple of assessments [12] are done particularly for a smart home, not for devoted healthcare. Over the past decade, numerous IoT-based health care applications have been seeing significant advancements [13, 14]. Researchers have been chipping away at an IoT execution reference model. In [15], proposed a standard structure for improving IoT applications, similar to smart healthcare. According to this article, the design of an IoT application is guided by three primary concerns of view: cloud-focused IoT, network-focused IoT and data-focused IoT. These three perspectives affected distinctive IoT applications to be executed. In [16], an IoT-focused investigation framework was utilized to demonstrate a client electronic gadget. The system settles with the customer if their health is above or below the reach of the standard. Accumulated data went to the cloud using an application and was sent off by the Field Programmable Gate Array (FPGA).

3.Drug Reminder For Diabetic And High Blood Pressure:

YEAR : January 2020

AUTHOR: Anderson, K. & Emmerton, L

Many problems of efficiency and convenience found in organizations can often be attributed to design flaws in existing systems, leading to high operation costs due to an increase in maintenance and operation costs of databases (Ghorab, 1995; Lai & Scheele, 2018). In fact, there is an increasing interest in health care systems technologies and solutions due to problems with standalone apps, such as inconvenience, inefficiency, lack of userfriendlinesss, and limited use value. Therefore, the present mobile users' engagement app research seeks to provide measurable results in terms of patients' adherence to the medication regimen for their respective health conditions, along with information that is valuable for analysis by doctors, nurses, pharmacists, and researchers.

The Technology Acceptance Model (TAM) developed by Davis (1989) is the most widely used framework in predicting information technology adoption (Venkatesh & Davis, 2000). Lee and Jun (2007) argued that TAM should be able to analyze factors affecting adoption intentions beyond perceptions of convenience and usefulness, although TAM has received much support (Lai & Zainal, 2015; Yang, 2005). TAM focuses on the effects on adoption intentions of perceptions of the technology's usefulness and convenience(Lai, 2014, 2018; Luarn and Lin, 2005) and useful in determining the technology adoption of a drug reminder app. This research aims to examine the relationships between the convenience factor, usefulness, ease of use, and patients' intention to use the drug reminder app. The theoretical framework is built upon previous research findings and theoretical achievements. Therefore, based on the extension and adaptation from the TAM and the Stimulus Research Model (Lai, 2014, 2017, 2018, 2019), this study used the underlying factors shown in Figure 1 to determine patients' intention to use the drug reminder app. Convenience is the stimulus that represents the system and the feature and experience, while the usefulness and ease of use are the associations that represent the motivation that will determine patients' intention to use. For the purpose of this study as shown in Figure 3, the following hypotheses were posited: • H1a: Convenience is positively associated with perceived usefulness. • H1b: Convenience is positively associated with perceived ease of use. • H2a: Design is positively associated with perceived usefulness. • H2b: Design is positively associated with perceived ease of use. • H3: Perceived ease of use is positively associated with perceived usefulness. • H4: Perceived usefulness is positively associated with patients' intention to use • H5: Perceived ease of use is positively associated with patients' intention to use Figure 3: Patients' stimulus research model. Research Design This research was targeted only at the diabetics and high-blood-pressure patients in Klang Valley, Malaysia,

4. Detecting Heart beat Using IOT

YEAR : August 2020,

AUTHOR: Sahana S Khamitkar, Prof. Mohammed Rafi.

A microcontroller based automatic heart rate counting system from fingertip Mamun AL, Ahmed N, ALQahtani (JATIT)Journal OF Theory and Applied technology ISSN 19928645 : In this research paper heart-rate signals were collected from finger or ears using IR TXRX (Infrared Transmitter and Receiver pair) module which was amplified in order to convert them to an observable scale. A low pass filter was used to filter inherent noise. These signals were counted by a microcontroller module (ATmega8L) and displayed on the LCD. Microcontroller is programmed with an algorithm to run the proposed heart rate counting system. The results obtained using this process when compared to those obtained from the manual test involving counting of heart rate was found satisfactory. The proposed system is applicable for family, hospital, community medical treatment, sports healthcare and other medical purposes. Also, fit for the adults and the pediatrics. However, this method in the developed system needs further investigation and need more functionality, which may be useful to consider advance in future research . Heart beat Sensing and Heart Attack Detection Using internet of things: IOT Aboobacker sidheeque, Arith Kumar, K. Sathish,(IJESCE) International Journal Of Engineering Science and Computing, April 2007 : In this research paper implementation of heartbeat monitoring and Heart attack detection system using Internet of things is shown. These days we saw increased number of heart disease and heart attack. The sensor is interfaced to a microcontroller that allows checking heart rate readings ad transmitting them over internet. The user may Set the level of heart beat limit. After setting these limits, the system starts monitoring and as soon as patient heart beat goes above a certain limit, the system sends an alert to the controller which then transmits this over the internet and alerts the doctors as well as concerned users. Also, the system alerts for lower heartbeats. Whenever the user logs on for monitoring, the system also displays the live heart rate of the patient. Thus, concerned patients may monitor heart rate as well get an alert of heart attack to the patient immediately from anywhere and the person can be saved on time. A Heartbeat and Temperature Measuring
System for Remote Health Monitoring using Wireless Body Area Network Mohammad Wajih Alam , Tanin Sultana and Mohammad Sami Alam International Journal of BioScience and Bio-Technology Vol.8, No.1 (2016):In this research paper, the design and development of a microcontroller based heartbeat and body temperature monitor using fingertip and temperature sensor is shown. The device involves use of optical technology to detect the flow of blood through the finger and offers the advantage of portability over conventional recording systems. Wireless body area network based remote patient monitoring systems have been presented with numerous problems including efficient data extraction and dynamic tuning of data to preserve the quality of data transmission. Evaluation of the device on real signals shows accuracy in heartbeat measurement, even under intense physical activity..

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