PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF-RELIANT

IBM Project

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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.An IOT Architecture for home-based elderly Health-care

AUTHOR: YANG GUO and GUOHUA BAI

Currently, medical information system used by most domestic hospitals is confined within the hospital alone. The medical data information is not shared with the outside the hospital, especially not with elderly home. The consequences of this non-sharable health information are resulting in waste of medical resources, low efficiency of health services, and high cost of health management. As a common expression from ancient China saying that "Superior doctors cure diseases before symptom, medium doctors cure diseases during symptoms, and inferior doctors cure diseases after symptoms, the current healthcare management is mainly on treatment of patient after the symptoms of diseases. The lack of preventive and monitoring management process may result in problem to predict many chronic diseases and to achieve sustained treatment effect. The existing healthcare system cannot integrate the multiple needs of healthcare. The current health care system is mostly ‘disease oriented’, that is, the healthcare system targeting for individual disease paroxysm, instead of the health of the patient. A consequence is that patient’s related information (health records or patient journals for example) is sliced according to kinds of diseases and the treatment locations. The multiple needs due to multi-diseases of elderly, especially chronic diseases cannot be integrated by today’s system.

2.Heart Attack Detection By Heartbeat Sensing using Internet Of Things

AUTHOR: DR.A.A.GURJAR and NEHA.A.SARNAIK

The system makes use of heart beat sensor to find out the current heart beat level and display it on the LCD screen. The transmitting circuit includes AVR family

microcontroller interfaced to LCD screen and this transmitting circuit is powered by 12V transformer. Similarly, the receiving circuit includes AVR family microcontroller and RF receiver and also has a 12V transformer. The receiver circuit also includes LED light and a buzzer which are used to alert the person supervising the heartbeat the heartbeat rate of the patient and turns on the LED light and buzzer as soon as the heartbeat level of the patient does not fall within the normal heart beat level set. Now we make this system universal for all the hospital rooms. Operator can seat in single place and able to monitor all the patients.

3. An IoT System for Remote Health Monitoring in Elderly Adults through a Wearable Device and Mobile Application

AUTHOR: LUIS A. DURÁN-VEGA AND MIGUEL A. GARCÍA-RUIZ

With the increase in global life expectancy and the advance of technology, the creation of age-friendly environments is a priority in the design of new products for elderly people healthcare. This paper presents a proposal for a real-time health monitoring system of older adults living in geriatric residences. This system was developed to help caregivers to have a better control in monitoring the health of their patients and have closer communication with their patients' family members. To validate the feasibility and effectiveness of this proposal, a prototype was built, using a biometric bracelet connected to a mobile application, which allows real-time visualization of all the information generated by the sensors (heart rate, body temperature, and blood oxygenation) in the bracelet. Using these data, caregivers can make decisions about the health status of their patients. The evaluation found that the users perceived the system to be easy to learn and use, providing initial evidence that our proposal could improve the quality of the adult's healthcare.

4. IoT based system for Heart Rate Monitoring and Heart Attack Detection

AUTHOR: TV SETHURAMAN, KARTIK SINGH RATHORE, AMRITHA G, KANIMOZHI G

In this system a real time heart rate monitoring and heart attack detection system is realised by using IoT. The proposed design is advantageous to patients of different age groups by providing real time heart health monitoring. It also provides security and privacy to the data of the patient. The proposed design is implemented as the real time monitoring system which helps in providing immediate health care facilities to the patient by using MQTT protocol and IFTTT protocol, alert system and location monitoring are other features of the design. In addition to this a local server is used to provide security, privacy and low latency.

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