VELALAR COLLEGE OF ENGINNERING AND TECHNOLOGY

PERSONAL ASSISTANCE FOR SENIORS WHO ARE SELF-RELIANT

TEAM ID:

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ABSTRACT

Sometimes elderly people forget to take their medicine at the correct time. They also forget which medicine He / She should take at that particular time. And it is difficult for doctors/caretakers to monitor the patients around the clock. To avoid this problem, this medicine reminder system is developed. The system provides convenient hardware and software support to serve the medicine in a user friendly way. An app is built for the user (caretaker) which enables him to set the desired time and medicine. These details will be stored in the IBM Cloudant DB. If the medicine time arrives the web application will send the medicine name to the IoT Device through the IBM IoT platform. The device will receive the medicine name and notify the user with voice commands.

LITERATURE REVIEW:

The Internet of Things is a new reality that is completely changing our everyday life, and promises to revolutionize modern healthcare by enabling a more personalized ,preventive and collaborative form of care. Aiming to combine these two important topics, this work presents an IoT-ready solution for the elderly living assistance which is able to monitor and register patients vital information as well as to provide mechanisms to trigger alarms.

AUTHOR: Thierry Edoh and Jules Degila

DESCRIPTION: Hospitals and nursing care homes are facing severe challenges such as lack of skilled workforces and cost explosion, among others. Especially, the western healthcare systems are headed over a cliff. nursing care houses, hospitals and government are working hard on solutions to overcome the crucial workforce scrises.Therefore, they are planning to hire nursing-workforces from abroad. They would also like to motivate families with monetary incentives, such as tax-reduction, if they can care for their elderly and/or dementia family members at home.

AUTHOR: B. David Chung Hua and Huzein Fahmi

DESCRIPTION: Due to the increase number world population of elderly citizen, as well as those who live in solitude, there is an immediate need to develop an intelligent monitoring system at home. Many elderly live independently but living alone can be difficult, if not dangerous, for seniors with declining cognitive abilities. In this research, we present an intelligent monitoring system based on IOT to monitor the elderly.

AUTHOR: Elena Borelli and Giacomo Paolini

DESCRIPTION: Data flexible and extensive digital platform for Smart app is presented, exploiting the most advanced technologies of the Internet of Things, such as Radio Frequency Identification, wearable electronics, Wireless Sensor Networks, and Artificial Intelligence. To support elderly people both in their own houses and in retirement homes, and embedding them in everyday life objects, thus reducing the expenses for healthcare due to the lower need for personal assistance, and providing a better life quality to the elderly users ,Thus the main novelty of the paper is the system-level description of the platform flexibility allowing the interoperability of different smart devices.

AUTHOR: Medhat Awadalla and Firdous Kausar

DESCRIPTION: The health care of elderly people addresses the necessity for services that utilize recent technologies and devices. Now-a-days, both loneliness and psychological depressions are typical problems which elderly people face because of living alone/abandoned or reduced communication with their children and relatives. This paper presents the development of an integrated platform using the Internet of Things to manage and provide extensive services for elderly people to address the aforementioned issues. The proposed platform relies on wearable sensor devices to collect real-time data and store it in a cloud server via a developed smartphone application.

AUTHOR: Aitor Almeidaa and Rubén Mulero

DESCRIPTION: The clinical utility of early detecting these conditions is of substantial importance in order to avoid hospitalization and lessen the socioeconomic costs of caring, while it may also significantly improve elderly people's quality of life. the health care sector in many advanced economies faces common issues, including labour and skills shortages, increased demand for long-term home-care systems and the need to invest in new technologies. All of these cost escalators make it more difficult for existing systems to handle the increased prevalence of age-related chronic diseases, therefore, in a very near future, aging population is going to become an economic concern for all the citizens and one of the greatest social and economic challenges for world society. This work deals with a critical performance analysis of an Internet of Things aware Ambient Assisted Living (AAL) system for elderly monitoring. The analysis is focused on three main system components:the City-wide data capturing layer, the Cloud-based centralized data management repository, and the risk analysis and prediction module. Each module can provide different operating modes, therefore the critical analysis aims at defining which are the best solutions according to context's needs.

AUTHOR: Sathish Kumar and Nivedha

DESCRIPTION: There is a rising concern in designing options for elderlies residing in a society with an increased population ageing. IoT is a revolutionary phenomenon that transforms our life entirely as well as aims to revolutionize current healthcare into a more individualized, precautionary and inclusive approach to treatment. In order to integrate these two main problems, this research provides an IoT-ready approaches for elderly living treatment that can track and record critical details for patients in emergencies and include protocols for activating alarms.The strong low / low-cost / wireless capabilities make this approach into a secure and convenient wristband, perfect for anywhere and anywhere

AUTHOR: Divya Ganesh and Gayathri Seshadri

DESCRIPTION: The advancements in medical science and technology has resulted in an increased life span thus the mortality rate of the elderly has greatly decreased. The elderly often gets cognitively impaired and require urgent medical services which when left unnoticed may lead to fatal consequences. Due to lack of social care support for these adults, there arises the need to develop cost-effective assistive healthcare technological solutions for taking care of the elders and giving them the best tech-friendly experience. Intelligent homes, an environment of sensors with artificial intelligence integrated with home appliances, can provide the best solution for continuous and remote monitoring of the health of the persons. This helps elders to control various devices, also get immediate attention from the family members, healthcare assistants and/or have frequent visit to hospitals.

AUTHOR: Smandzik and Daniel

DESCRIPTION: Technical solutions are needed that support nurses and relatives with available patient information. Therefore, the question arises whether wearables as a technology are suitable for collecting and monitoring personal vital data in the geriatric sector. This master's thesis is aiming at developing a prototype of an Apple Watch and iPhone application to support elderly people both in their own houses and in care facilities, and embedding the application in their everyday life. Thus, reducing the expenses for healthcare due to the lower need for personal assistance, and providing a better life quality to the elderly users. The prototype focuses on the monitoring of health vitals and the proper medication intake. A survey is carried out in order to obtain a preliminary assessment of the functionality and acceptance of such a prototype. The finished prototypes are then evaluated by interviewing the target group of care-givers to asses the scope of functionalities, usability and information quality.