

Question Code: IT07

Topic Name: An IoT based elderly-care system

Abstract:

Ageing is inevitable but we can become capable enough to deal with the associated health problems for better care of the elderly. The Internet of Things (IoT) has the potential to revolutionize the way we care for the elderly, particularly those living independently or away from their family.

In this project, we propose the development of an IoT-based system for elderly care that uses wearable technology incorporating the use of sensors, LED display and some other electronic devices coupled together with a microcontroller that will be programmed in an embedded language.

The device will collect the elderly's health data, such as their heart rate and temperature levels of the body and the surroundings, and transmit this information to the software. The software will then analyse it and send the report to the family members. This allows early detection of potential health issues and can prevent them from becoming serious. The system is capable of connecting to some smart home technology to assist with tasks such as turning off lights or adjusting the AC temperature depending on the need of the elderly, thus increasing the elderly's independence. The system will also include fall detection and medication management features to detect if the elderly had a fall or missed the medication and based on it an alert is sent to the family members.

Our ideated model is feasible as long as the necessary technology and equipment are available and will prove beneficial to both the elderly and their caretakers. It has the potential to improve the quality of life of the elderly by enabling remote monitoring and communication, automating certain tasks thereby reducing the need for human assistance. The privacy and security of the data being collected and transmitted have been considered.

In a nutshell, our project aims at designing and implementing a system that is tailored to the elderly's specific needs and comforts their life and that of their loved ones.

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