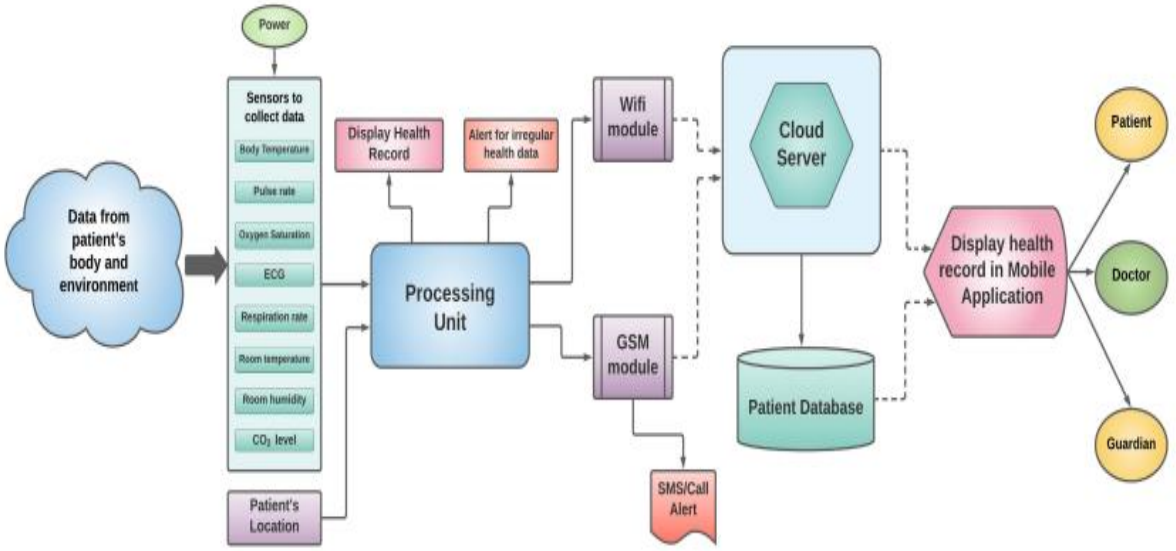
Design and Implementation of a Feasible Model for the IoT Based Ubiquitous Healthcare Monitoring System for Rural and Urban Areas with data optimization



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Abstract: The Internet of Things (IoT) based real-time health monitoring system with data optimization has contributed towards brilliant human welfare both in urban and rural areas. Many of such solutions are not well applicable in developing countries like Bangladesh due to the lack of an uninterrupted communication system. In this paper, we present an IoT-based real-time health monitoring system that can measure, monitor, and report people's health conditions online and offline from anywhere with data optimization which reduces cloud storage. Our proposed IoT-based solution is capable to transmit sensitive health information to medical centers and caregivers in real-time in any critical situation of patients. The system can also provide the patient's historical health records within a certain period of time.

Existing health monitoring systems continuously collect health data using sensors and store data in the cloud then retrieve data from the cloud database to the mobile application. In this paper, we proposed a method of reduced uses of cloud storage that means only emergency data can be stored in the cloud, and also mobile applications, then to transmit sensitive health information to medical centers and caregivers and send an emergency alert. This paper also provides some valuable decisions using NLP with the help of data analysis by professionals. The proposed system has a high potential for the rural and urban areas in developing countries with fewer memory uses given valuable decisions.

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