

IoT-based Portable ECG Monitoring System for Smart Healthcare

Sudden and unexpected death due to heart failure is a major cause of mortality among middle aged and elderly people. An efficient heart monitoring system can find out the malformation of heart conditions and that can also be helpful in diagnose at critical ambience. Sometimes the distance between patients and doctors is the main barrier that people do not have access to quality health services and thus having trouble for their regular health examine. IoT-based healthcare monitoring system is one of the manifested application areas in medical science. As a significant access in diagnose heart disease ECG observing system is widely used. In this paper, a progressive method for ECG monitoring system based on Internet of Things (IoT) has been proposed. In this study, a system is designed to frequently monitor the Electrocardiogram (ECG) signal collected from patient's body using wearable sensors and the data is stored into the database which can be accessed by authorized personnel only. When any malformation is found an automatic email is sent to the users and doctors for analyzing about the critical conditions of the patients and provides emergency health assistances. In order to verify the authenticity of this system tests have been implemented on several patients and the report shows that, this system is dependable and efficient for collecting real time ECG data which can be very helpful in diagnose heart diseases. This IoT-based low cost device can be reliably used to reduce the risk of disability and mortality rate due to cardiovascular diseases.

Keywords:- Electrocardiogram (ECG), IOT, Portable

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