

IoT based real-time remote patient monitoring system

ABSTRACT

Healthcare technology is one of the most popular studies nowadays. With the development of healthcare technology, the lifespan of people has successfully extended. However, people in the rural area are still having a hard time to obtain professional healthcare services due to the barrier of distance and lack of doctors. A remote patient monitoring system is one of the best solutions to overcome this issue. This paper proposes an Internet of Things (IoT) based real-time remote patient monitoring system that is able to guarantee the integrity of the real-time electrocardiogram (ECG). Message Queuing Telemetry Transport (MQTT) protocol is used for transmitting the real-time ECG from the proposed system to the webserver. The doctor can access the webserver via smartphone or computer to monitor the real-time or previously recorded ECG data. The proposed system has been tested in both Local Area Network and Wide Area Network environments. The results show that the proposed system has no package loss and packet error in both Local Area Network and Wide Area Network.