

عنوان مقاله:

Design and implementation of monitoring and analysis system of pulse oximeter and body temperature

محل انتشار:

چهاردهمین کنفرانس بین المللی بهداشت، درمان و ارتقای سلامت (سال: 1402)

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خلاصه مقاله:

Healthcare helps prevent illness and improves the quality of life. The use of healthcare devices are improving in today's world and ensuring that most of people have access to the healthcare services they need. A portable pulse oximeter and body temperature device is proposed, which displays the patient's vital sign data through the web server or SMS. The device can monitor and display data in real-time. It is well suited for portable medical applications, such as continuous home-care monitoring for patients and remote patients monitoring. The used sensors in proposed device were a body temperature sensor and a blood oxygen sensor. Three vital parameters had been measured for several times and compared with a commercial device. The degrees of body temperature, heart rate and SpO₂ rate have high accuracy comparable to standard medical devices and can be used for remote monitoring application. From the test results obtained the error measurement of body temperature equal to ۰.۶۸۹% and for measurement of BPM (heart rate) equal to ۰.۹۵۸% and SPO₂ equal to ۱.۰۲%. The main aim of this system is to measure the essential parameters using sensors. The system allows doctors to analyze data remotely.

کلمات کلیدی:

Body temperature, Heart rate, SpO₂

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