Vision Aid : Multipara Monitoring

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Abstract*: Mathematical and signal-processing methods were used to obtain reliable measurements of the heartbeat pulse rate and information on oxygen concentration in the blood using short video recordings of the index finger attached to a sensor and displayed smartphone built-in camera. This project focuses on developing a wireless, multi-parameter patient monitoring system using two NodeMCU ESP8266 microcontrollers, a MAX30100 pulse oximeter, and an MLX90614 non-contact infrared temperature sensor. The system aims to provide real- time, remote monitoring of vital physiological parameters like heart rate, blood oxygen saturation, and body temperature. The system aims to provide real-time, remote monitoring of vital physiological parameters like heart rate, blood oxygen saturation, and body temperature. The hardware implementation uses two NodeMCU boards for optimal data acquisition and communication. The software component uses Arduino IDE for microcontroller programming and Firebase for cloud-based data storage and application development. The system's wireless nature and cloud-based data storage make it suitable for home health-care, telemedicine, and remote patient management. The modular design allows for future expansion, and the use of open-source platforms promotes cost-effectiveness and accessibility. The system's ability to provide continuous, real-time monitoring contributes to improved patient safety and enhanced health-care delivery.*

Keywords: multipara monitor

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