Patent Search

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Abstract:

AI-Based Real-Time Patient Monitoring and Emergency Alert System ABSTRACT The invention relates to an AI-based real-time patient monitoring and emergency alert designed to continuously track vital health parameters and provide immediate alerts in the event of detected abnormalities. The system utilizes a variety of medical s including heart rate monitors, electrocardiogram (ECG) devices, blood pressure cuffs, pulse oximeters, and thermometers, to collect real-time health data from the pa data is transmitted to an AI processing unit, where machine learning algorithms analyze the information to detect deviations from normal health parameters. Upon id anomaly, such as abnormal heart rate, blood pressure, or oxygen saturation levels, the system generates an automated emergency alert and communicates it to hea providers, caregivers, or emergency responders via mobile applications, SMS, or email. The system operates autonomously, ensuring immediate action can be taken requiring manual intervention. With its ability to adapt to individual patient data over time, the AI model improves the accuracy of anomaly detection and reduces fals Additionally, the system's edge computing capabilities ensure real-time data processing and alert generation, minimizing delays caused by network issues. This invent comprehensive solution for continuous patient monitoring, early detection of health risks, and prompt emergency intervention, enhancing patient safety and healthc outcomes in a variety of settings, including hospitals, outpatient clinics, nursing homes, and home healthcare environments.

Complete Specification

Description:AI-Based Real-Time Patient Monitoring and Emergency Alert System

FIELD OF THE INVENTION

The present invention relates to the field of healthcare technology, specifically to an AI-based real-time patient monitoring and emergency alert system. More partic the invention pertains to systems designed to monitor a patient's health parameters continuously using various sensors, analyze the data in real time using artificia intelligence, and provide immediate emergency alerts in the case of detected abnormalities. This system is intended for use in medical environments such as hospi clinics, and home healthcare settings, as well as for mobile health applications, enhancing patient safety and enabling faster medical responses.

BACKGROUND OF THE INVENTION

In recent years, healthcare monitoring systems have undergone significant advancements, driven largely by technological innovations in medical devices and artifici intelligence (AI). Traditional patient monitoring systems, while effective in tracking essential health parameters such as heart rate, blood pressure, and oxygen satur often rely on manual intervention for regular health checks and emergency responses. These conventional systems are frequently reactive, triggering alerts only aft critical changes in a patient's condition have already occurred. As a result, delays in response times can occur, especially in emergency situations, leading to adverse outcomes for the patient. Furthermore, in the context of home healthcare, patients may not always be under constant supervision, leading to additional risks when conditions deteriorate unexpectedly.

Recent advancements in sensor technology, coupled with the development of real-time data processing systems, have improved the capability of healthcare monitc

View Application Status

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