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Patent Search

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Abstract:

Wearable IoT Device Network for Continuous Health Surveillance and Emergency Response ABSTRACT The present invention relates to a wearable Internet of Things network designed for continuous health surveillance and emergency response. This system utilizes wearable devices equipped with sensors to monitor vital health parameters such as heart rate, blood oxygen levels, body temperature, and movement in real-time. The data collected by these sensors is transmitted wirelessly to a cloud-based server where it is processed and analyzed using advanced algorithms. The system is capable of detecting health anomalies or critical conditions, such as abnormal heart rate, respiratory distress, and automatically triggers emergency alerts to healthcare providers, emergency responders, or designated contacts. In addition to health monitoring, the system integrates location-tracking technology to provide emergency responders with the user's real-time location during an emergency. This ensures that responders can reach the user quickly, reducing the time between health crisis detection and intervention. The system also offers a user interface through a mobile application or web platform enabling users to track their health data, set personal health goals, and receive notifications for abnormalities. This invention enables proactive health management, detection of health risks, and timely emergency responses, ultimately improving health outcomes and reducing the risk of complications or death in critical situations.

[Complete Specification](#)

Description:Wearable IoT Device Network for Continuous Health Surveillance and Emergency Response

FIELD OF THE INVENTION

The present invention relates generally to the field of health monitoring systems, and more specifically to a wearable Internet of Things (IoT) device network for continuous health surveillance and emergency response. The invention involves the integration of wearable devices equipped with sensors that monitor various physiological parameters and transmit data in real-time over a wireless network to a cloud-based platform. This system facilitates continuous health monitoring and enables automatic emergency response in critical health situations, providing timely intervention and improving healthcare outcomes.

BACKGROUND OF THE INVENTION

The advent of Internet of Things (IoT) technology has revolutionized various sectors, including healthcare, by enabling continuous data collection, remote monitoring, and real-time communication. Wearable devices, integrated with IoT networks, have emerged as a pivotal component in modern health surveillance systems. These devices offer numerous advantages, such as enhanced mobility, real-time data acquisition, and the ability to monitor vital health parameters continuously. However, despite these advancements, existing health surveillance systems still face significant limitations in terms of real-time response to health emergencies and the seamless integration of health data with emergency response mechanisms.

Traditional healthcare systems often rely on periodic checkups and manual monitoring of health parameters, which can delay the identification of critical health conditions. For instance, patients with chronic conditions such as cardiovascular diseases, diabetes, or respiratory disorders typically need frequent checkups to monitor their health status. These periodic checks are usually done in healthcare facilities, which is time-consuming, inconvenient, and sometimes impractical for patients who require continuous monitoring.

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