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IoT based ECG Signal Feature Extraction and Analysis for Heart Disease Risk Assessment

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Abstract:

Digital healthcare solutions are being created to meet the demands of the healthcare industry. Advances in IoT and cloud computing have led to the development of numerous smart healthcare solutions for elderly people and people with chronic diseases. Healthcare centres and physicians get the opportunity to assess the health of patients from anywhere through the developed smart systems. In this work, an IoT and cloud-based healthcare system is developed for ECG signal parameter extraction and machine learning-based analysis that will be helpful in heart disease risk assessment. The minimal local signal processing required by IoT-based healthcare equipment is made possible by cloud computing. However, there are certain concerns related to service quality issues while employing a cloud framework for real-time monitoring and signal processing. This work proposes ECG beat rate detection and machine learning-based analysis in an IoT-based framework. Finding the precise location of the QRS complex during ECG data processing facilitates the detection of heart rate variability (HRV) parameters, which will play a crucial role in the risk assessment of heart diseases.

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 **Contents****I. Introduction**

One of the most significant breakthroughs in recent years to enhance the quality of human life is digital healthcare. Wearable technology is useful for gathering a variety of physiological data, including heart rate, blood pressure, temperature, physical activity, blood glucose level, and cholesterol level. Numerous chronic illnesses, including cancer, cardiovascular disease, stroke, diabetes, chronic kidney disease, and arthritis, may be evaluated with the use of observed physiological data. Even though there are numerous wearables available on the market, it is really a challenging task to locate one that is affordable and can diagnose chronic conditions. The results of these assessments will be useful in warning individuals about the effects of particular chronic conditions and in providing the knowledge they need to take preventive action. ECG signal beat rate detection is usually carried out using various preprocessing techniques and complex QRS detection algorithms. In this work, base line drift elimination and other noise component elimination are completed before performing machine learning based risk analysis.

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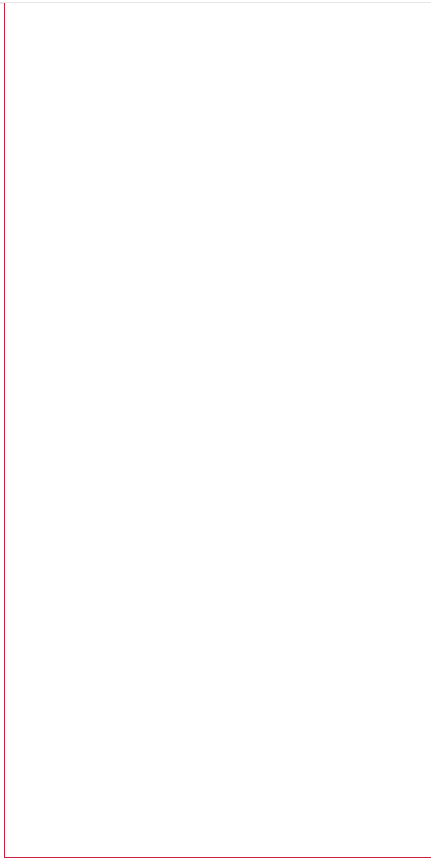
A robust real time system for remote heart rate measurement via camera
2015 IEEE International Conference on Multimedia and Expo (ICME)
Published: 2015

Cloud-based real-time heart monitoring and ECG signal processing

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