Abstract

An Electrocardiogram (ECG) gives significant information for the cardiologist to detect cardiac diseases. Automation algorithm is essential to analyse long ECG data. In this paper, we have proposed fully automated, high efficiency, accurate and fast algorithm to detect abnormalities in ECG based on wavelet transform. The algorithm consists of pre-processing, feature extraction and diagnosis. Number of heart beats and Premature Ventricular Contraction (PVC), Premature Atrial Contraction (PACs), Supraventricular tachyarrhythmia and Bradycardia are diagnosed accurately and result matches with doctors opinion. The average sensitivity of algorithm is 99.70%.

References

Automatic Diagnostic System for Long-Term ECG Data from Holter Monitor

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Index Terms

Computer Science

Biomedical

Keywords

Abnormality Detection  Ecg Signal  Wavelet Transform  Noise  Baseline Drift