A Technical Review on Statistical Feature Extraction of ECG signal

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Abstract

ECG Feature Extraction plays a significant role in diagnosing most of the cardiac diseases. In this paper a comprehensive review has been made for statistical feature extraction of ECG signal analyzing classifying method which have been proposed during the last decade and under evaluation that includes digital signal analysis, Fuzzy Logic methods, Artificial Neural Network, Hidden Markov Model, Genetic Algorithm, Support Vector Machines, Self-Organizing Map, Bayesian and other method with each approach exhibiting its own advantages and
disadvantages. To diagnose the condition of the heart Electrocardiography is an important tool but it is a time consuming process to analyze a long duration ECG signal as it may contain thousands of heart beats. Hence it is desired to automate the entire process of heart beat classification and preferably diagnose it accurately. For subsequent analysis of ECG signals its fundamental features like amplitudes and intervals are required which determine the functioning of heart.

**Reference**

- Emran M. Tamil, Nor Hafizah Kamarudin, Rosli Salleh, M. Yamani Idnaldris, Noorzaily M. Noor, and Azmi Mohd Tamil, “Heartbeat Electrocardiogram (ECG) Signal Feature Extraction Using Discrete Wavelet Transforms (DWT).”

**Index Terms**

Computer Science

Neural Network

**Key words**

Artificial Neural Network

ECG Signal

Fuzzy logic