

ECG Signal Analysis Based on Flexible ECG Detectors

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Abstract

Diseases of the human are usually accompanied by abnormal changes in certain physiological parameters, such as a cold usually accompanied by an increase in body temperature, and cardiovascular disease is usually accompanied by changes in blood pressure.

Electrocardiogram (ECG) is a physiological parameter produced by the electrical activity of the heart transmitted to the surface of the skin. Since the heart is the most important organ in the human body, it is responsible for transporting blood to the body and regulating the body's internal environment. Changes of the body should also be reflected in the activity of the heart and on the ECG signal.

As their advantages, flexible electronic devices can detect human physiological signals for days, including ECG signals. This has great research value for the analysis of some intermittent diseases, such as atrial fibrillation and ventricular fibrillation caused by various diseases.

In this work, the ECG signals obtained based on flexible electronic devices are restored, analyzed and processed, and various types of valuable eigenvalues are extracted, and combined with various primary diseases and physiological fatigues of the human body through various algorithms. Connection between them is established and a basis for the diagnosis of primary disease and fatigue based on ECG signals is given.

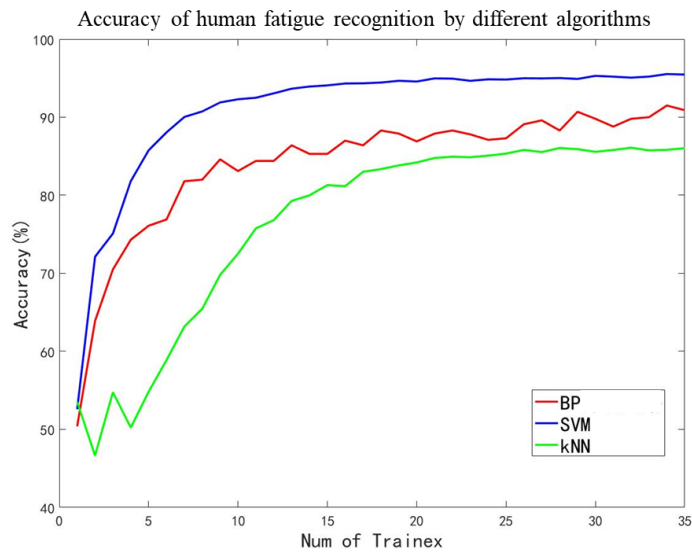


Figure 1: Accuracy of human fatigue recognition by different algorithms

References should be sorted in alphabetical order as shown below, where 错误!未找到引用源。 exemplifies the case of a textbook, while [1] is an article in a journal and [2] is an article in conference proceedings.

References

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