Novel Algorithm for Feature Extraction and Feature Selection from Electrocardiogram Signal

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Abstract

It has been seen that emotion recognition is an important research topic in the field of Human and computer interface. A novel technique for Feature Extraction (FE) has been presented here, further a new method has been used for human emotion recognition which is based on HHT method. This method is feasible for analyzing the nonlinear and non-stationary signals. Each signal has been decomposed into the IMF using the EMD. These functions are used to extract the features using fission and fusion process. The decomposition technique adopted is a new technique for adaptively decomposing signals. In this perspective, the potential usefulness of EMD based techniques is reported here. The algorithm developed is based on the Augsburg University Database; the manually annotated database.

References

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Index Terms

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Keywords

Intrinsic Mode Function (IMF), Hilbert-Huang Transform (HHT), Empirical Mode Decomposition (EMD), Emotion Detection, Electrocardiogram (ECG).