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Use of Hierarchical Temporal Memory Algorithm in Heart Attack Detection

Authors : Tesnim Charrad, Kaouther Nouira, Ahmed Ferchichi

Abstract : In order to reduce the number of deaths due to heart problems, we propose the use of Hierarchical Temporal Memory Algorithm (HTM) which is a real time anomaly detection algorithm. HTM is a cortical learning algorithm based on neocortex used for anomaly detection. In other words, it is based on a conceptual theory of how the human brain can work. It is powerful in predicting unusual patterns, anomaly detection and classification. In this paper, HTM have been implemented and tested on ECG datasets in order to detect cardiac anomalies. Experiments showed good performance in terms of specificity, sensitivity and execution time.

Keywords : cardiac anomalies, ECG, HTM, real time anomaly detection
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