Abstract

Machine learning has become an integral part of human research now a day. People are tending to select more automatic system rather than going with the manual handling. Data mining is that domain which has shown an improvement in health care industry. The proposed system deals with the classifier to study the cardiac rhythm of undiagnosed cardiac patients. However, there are many studies which were practiced over the multimedia analysis of the cardiac rhythm. The approach in this system has used the ECG dataset which will train our machine and classify the dataset. Through this dataset the following classes: Ventricular Tachycardia (VT), Ventricular Fibrillation (VF), Pulseless Electrical Activity (PEA), Asystole (AS), and Pulse-Generating Rhythm (PR) can be determined. In this dataset, features were selected using wrapper-based feature selection architecture. The ECG dataset used in this approach were practiced on various algorithms: Bayesian decision theory, k-nearest neighbor, k-local hyperplane distance nearest neighbor, artificial neural network. After classifying using these algorithms, the result of each was combined through Ensemble Decision Tree (EDT).
References


Index Terms

Computer Science

Biomedical

Keywords

Electrocardiogram, Ventricular Tachycardia (VT), Ventricular Fibrillation (VF), Pulseless Electrical Activity (PEA), Asystole (AS), Pulse-Generating Activity (PR), Bayesian Decision Tree, K-Nearest Neighbor (KNN), K-Local Hyperplane Distance Nearest Neighbor.