Abstract

Supraventricular tachycarida (SVT) is one type of arrhytmia. Due to improper electrical activity in the upper part of the heart, it causes an increase in heart rate. The causes of SVT vary from congential heart disease, anemia, smoking, fever to side effects of drug. To detect SVT this system will use K-Nearest Neighbor as classifier. This research was conducted to find out which KNN classifier is the best. Conduct experiments on several KNN classifier algorithms and apply the KNN results from the previous stages. It is hoped that this classification will get mot accurate results compared will getmore accurate results compared to other methods. Accuracy, sensitivity, and specificity data values can be different in each classification data collection. So the author took 5 samples of data from each KNN classification method. And, there are still very few reference journals from within and outside the country that classify KNN on SVT. So that the author does not have a comparison reference for the good and bad results obtained. The best results obtained are purely from the classification results of the 4-KNN methods and the data samples used by the author. To solve the problems above, this final project evaluates the classification results from the KNN method. No less important, this final project also evaluates the classification results in the form of accuracy, sensitivity, and specificity. The methods used in this research are 1. Literature study on KNN classification, 2. Comparison of classification algorithms, 3. Performance testing and evaluation. The performance test results show that the Manhattan KNN classification algorithm has the best average with k = 1. From 5 times data sampling reached an average of 86.98. With 86.28 accuracy, 87.88 sentivity, and 86.78 specificity.

Keywords: Supraventricular tachycardia, k-nearest neighbor.