Abstract

The lungs are human organs that have an important role in the respiratory system. The lungs can meet the needs of oxygen in the body, but if the lungs experience a disorder then the respiratory system will be affected and can even cause death. Wheezing is a marker of abnormal lung symptoms experienced by each individual. Wheezing occurs repeatedly, with a high pitch and often heard during expiration. This final project research carried out the feature extraction process using Discrete Wavelet Transform (DWT) with different basic functions such as, Wavelet Coiflet, Symlet, and Daubechies. The results of the wavelet basis are used as input in the classification stage using K-Nearest Neighbor (KNN). After testing the data from the Respiratory Sound Database 2018, the results obtained are Wavelet Daubechies4 level 10 which produces the highest performance with an Accuracy value of 68.45%, Sensitivity 68.43%, Specificity 75.61%, and F-1 Score 68.27%.

Keywords: extraction feature, wheezing, DWT