

ABSTRACT

Lung is one of respiratory organ which function is to exchange oxygen and carbondioxide from blood with hemoglobin helps. As an important organ to body, its health must be taken care properly from any disease. One of doctors way to diagnose lung disease is hearing breathing sound in lung using stethoscope. Some lung disease produce unique lung sounds, which is refers to special recognized pattern. This pattern could be use to classify which kind of disease it is. The problem is the frequency of lung sounds are low (20 - 2000 Hz), low amplitude, interference from other sounds, ear sensitiveness, and low variety of the pattern of lung sounds that are almost similar. These factors remain to the false diagnosing of lungs disease if the auscultation procedures aren't conducted correctly.

In these research will be comparing classification of normal and abnormal lung sound to determine which metode is better. Lung sound will be decompose using 5 level wavelet daubechies2 transformation. In classification process will using Support Vector Machine One Against all, Support Vector Machine One Against One, and PNN (Probabilistic Neural Network).

The result of this research are: average accuration for Support Vector Machine One Against All is 47,55%, Maximum accuration is 70%, and average computation time is 0,006 second. Average accuration for Support Vector Machine One Against One is 50,92%, Maximum accuration is 75%, and average computation time is 0.012 second. Average accuration for Probabilistic Neural Network is 70%, maximum accuration is 70%, and average computation time is 0.313 second.

Keyword: Lung sound, wavelet Daubechies2 decomposition, Support Vector Machine, probabilistic neural network