

ABSTRACT

The brain is a vital organ in humans that is able to provide response signals. Signal responses in the human brain vary depending on physical activity or the presence of a stimulus. The brain also has a role in determining a person's concentration. This affects a person's ability to learn. Therefore, the required stimulus affects a person's brain response like listen to relaxing music

In this study, an classification of the human respon brain signals with EEG device on listening and not listening to relaxation music was carried out. The method used is Discrete Wavelet Transform (DWT) as a feature extraction method that is able to decompose a given signal into a set, the set is a time series of coefficients that describe changes in signal time in the appropriate frequency. DWT is able to extract signals for alpha and beta waves to get a feature that will affect the next stage, namely in carrying out the classification process using the Support Vector Machine (SVM) method.

In this study, 10 respondents were used and divided into 7 training data and 3 test data based on 2 different stimuli. The tool used to obtain data was *NeuroSky MindWave*. The results of this study have been able to show the shape of the signal *alpha* and *beta* for each respondent, testing the test data obtained the best accuracy of 83,33% with the parameters of Kernel Polynomial and Linear level type DWT=4 and type DWT=db3.

Keywords : *Elektroensephalogram, Discrete Wavelet Transform, Support Vector Machine, Gelombang Alpha, Gelombang Beta, Word Memotization Test, Relaxing Music*