

ABSTRACT

In general, human brain waves can change during normal conditions and during activities. Therefore every human being has a different level of concentration. Concentration is the ability to focus a situation on an object. Concentration is needed because the mind can be controlled and can train memory. However, many people have difficulty concentrating due to various factors, such as sleeping, dreaming, stress, fatigue, or being active.

Based on this, a study was conducted which aimed to classify the results of a person's concentration when working on a picture guessing test, in which a person requires a high level of concentration when doing it. Therefore the concentration can be known by using a signal Elektroencephalogram (EEG) which can record electrical activity in front of head (frontalis).

In this study using the method discrete wavelet transform (DWT) as a feature extraction method by extracting signals to brain waves to obtain a feature, and the classification process uses the method k-nearest neighbor (K-NN) which aims to determine the class in concentration and non-concentration conditions. The results of this study have been able to show the shape of the EEG signal for each respondent, testing the test data obtained the best accuracy on parameter $K = 5$, namely 58%.

Keywords: *Electroencephalogram, Discrete Wavelet Transform, K-Nearest Neighbor.*