

ABSTRACT

Brain is the main body that serves as a controlling motion and emotion of the soul. As the center of emotional control of the soul, brain is able to make emotional responses of happy, sad, anxious, depressed and fearful. One of the most interesting responses to be researched is the response to a fear. Many types of fears such as fear of a particular condition, fear of an object and mythology that developed in the community. The unique thing to be research more deeply is the fear of a certain condition, such as someone who will be faced with the condition of fear when seeing a horror movie. Someone will feel the sensation of fear generated from some scene in the movie, which will be able to cause stimulation of the brain. The stimulation can be recorded through an electroencephalograph or EEG device that serves as a signal recording device that occurs in the brain. From the EEG output there will be 5 types of brain signals such as alpha, beta, delta, theta and gamma signals with their respective frequencies.

In this research we will observe 5 types of channels, that are AF3, T7, Pz, T8, AF4 using DWT method because the method is a logic function that divides data into several different frequency components, then analyzed for each component using resolution according to the scale that can be utilized to separate the signal to be analyzed, that are alpha and beta signals, this will facilitate the process of signal analysis so it does not combine with other signals such as delta, theta and gamma and use the K-NN classification with parameters $K = 1, 3, 5, 7, 9$.

The result from signal pattern comparison shows that alpha signal is more liable in AF3 and AF4 channels. While beta is more liable in T7, Pz and T8 channels. the simulation results show that the highest alpha signal accuracy is on the AF3 channel with an accuracy of 66.66% and the beta signal is on the T8 channel with an accuracy of 55.56%.

Key words: Film, Horror, EEG 5 Channel, DWT, K-NN, alpha and beta