

## **ABSTRACT**

*Horror Movie is a movie that is made to create or giving some real life situation and condition such as fear, shock, scare and terror to its audiences. This makes it's own stimulus to the brain caused by the ion fluctuation in brain neurons that can be read by electroencephalograph (EEG) tool. Based on the range of frequency signals the brain is divided into has 5 types of signal patterns, those are alpha, beta, theta, delta and gamma with each has 5 characteristics of frequency and each represents different human condition.*

*In this research Principal Component Analysis (PCA) method is used as feature extraction and K-Nearest Neighbor (K-NN) classification method is used with the data input from EEG signals. Those method are selected as the function of splitting the data signals to some components based on the frequency and classifying the brain waves itself to obtain the output in the form of human emotional condition.*

*The purpose of this research is to understand the comparison of alpha and beta signal while given a stimulus of horror movie scene, supported by synchronizing heart beat, face expression and habitual act. The result of comparison in this research is that beta signal is more liable in AF7 and AF8 channels, and alpha signals are more liable in TP9 and TP10 channels. The best accuracy of this research with 2 scenario is 77,7% in alpha signal and 77,7% in beta signal.*

***Keywords: EEG, alpha, beta, Principal Component Analysis, KNN***