

ABSTRACT

Trypophobia is one of the specific phobias that refers to fear, panic, and disgust when given visual stimuli consisting of objects in the form of a collection of hollow and harmless objects such as water condensation, honeycomb, and sea sponge. Electroencephalograph (EEG) is a tool to record electrical activity in the brain through electrodes placed on the scalp. Recorded EEG signals contain information about the physiological state of the brain and neurological disorders of the brain.

In this final project built a system to detect tryphobia based on pattern analysis of alpha and theta EEG signals. The Hjorth Descriptor method is an EEG signal characteristic extraction method. For the classification method using Support Vector Machine.

The test result shows the best accuracy on alpha signal in RBF kernel obtained with 95.83% and on theta signal obtained with 87.5% to detect tryphobia and not tryphobia. And done the test by adding stress class with the best alpha accuracy of 75% and theta signal 66.66%. It can be concluded that tryphobia signals are different from those not tryphobia. However, when compared with stress conditions, tryphobia signal is still similar to the stress conditions.

Keywords: *Trypophobia, Electroencephalograph, Hjorth Descriptor, Support Vector Machine*