

ABSTRACT

Human need sleep to curb stress. Lack of sleep make easy stress, worried, and uptight. Therefore enough sleep is more important. At sleep, the brain moves, respond, and generate brainwave. In sleep has divided two condition method eye there is Rapid Eye Movement (REM) and Non Rapid Eye Movement (NREM). Either way to detect and record brainwave is Electroencephalography (EEG). Therefore this research will classify depth of sleep in EEG signal using HJORTH Descriptor to extraction the feature of data. After that will classify using Support Vector Machine.

In classifying it, this research take data from research Analysis of a Sleep-Dependent Neuronal Feedback Loop: The Slow-Wave Microcontinuity of the EEG. The data has been pre-processing, after that using HJORTH Descriptor to extract characterstic feature signal of EEG and classify using SVM too see the sleep condition included in the category depth of sleep, well sleep, or not well sleep.

In this research just took 39 data consisting of 20 correspondent in two night difference condition. The first night normal sleep recorded. The second night Temazepam has given to correspondent. This research divided to three situation in every sleep corespondent. The situation is 5 minutes early sleep (when the lights on), 60 minutes at the lights off, and 60 minutes before waking up. This research has been reach 100% using Linier kernel SVM, produce output condition of sleep consisting of depth of sleep when the lights off, well sleep when before waking up, not well sleep when the lights on.

Keywords: *EEG, NREM, REM, HJORTH Descriptor, SVM*