ABSTRACT

Stress is a form of stimulation or response of a condition that makes a person uncomfortable or feel depressed, and it is a reaction that is formed naturally in a person. In general, a person who is experiencing stress, they are unable to perform optimally, and if the stress period has passed, the person will return to normal conditions. However, stress in humans can also last for a long time, it will cause discomfort to himself, anxiety and anxiety. If prolonged stress is not handled quickly and appropriately then it can have a negative impact on the sufferer.

This study will design a system to detect stress levels in humans. This study was conducted on 30 final-level students at Telkom University, 20 data from 30 people were training data, and 10 system validation / testing data. This system will monitor a person's stress levels by using an electrodermal activity sensor (EDA) as the main sensor, and also use an electrocardiography sensor (ECG) as a parameter to compare the results of stress obtained. This sensor will detect on the palmar part of a person's skin through data retrieval experiments. The resulting output data is raw data / raw data in the form of resistance parameters, which then the data is reprocessed to get classification with high accuracy using machine learning with k-NN classification method. In the preparation of this final task, the accuracy value obtained from this monitoring system reached 97%.

Keywords: *Stress, electrodermal activity, monitoring stress levels, human skin conductants.*