

ABSTRACT

Electricity is the energy needed by modern society today. As time goes by, the need for electricity is increasing from time to time, therefore it is necessary to make a tool that is able to identify the type of electrical load that is running by using the harmonic value of Airus, especially at home in order to find out what needs are running and be able to reduce expenses. Waste of electrical energy is usually not realized by electricity users because they forget what the load is running.

In this research dataset retrieval, current harmonic values from 4 different types of loads are taken using EMG-25. This system is able to identify the electrical load that is being used by using the Support Vector Machine algorithm, so that it is able to identify household electronic devices that are using electrical energy..

By modeling the Support Vector Machine algorithm used to obtain system accuracy results of 88.02% obtained by using the harmonic values of HI3, HI5, HI7, HI9 and HI11 using parameters $C=100$ and $\text{Gamma}=0.5$.

Keywords: *Electrical load, current harmonics, Support Vector Machine.*