

ABSTRACT

DESIGN AND IMPLEMENTATION OF INDOOR LIGHTING SYSTEM BASED NEURAL NETWORK

Lighting in a room is one of the things that are needed by humans because with the lighting activities can run well. Generally the lighting arrangement has only two conditions namely the on or off lights. Setting with on-off principle is inefficient because it does not pay attention to outside light. For that we need an energy saving effort on the lighting system.

In this final project, designed a system that can categorize lighting of lamp in room by using Backpropagation Neural Network. The system input is derived from the LDR value converted to lux and then the value is processed in Arduino Mega 2560 using Backpropagation ANN. In the ANN process, the value of luxmeter used as learning data and testing and output system in the form of classification of brightness level of lights in the room.

Based on the testing process, Sensor Cahaya 1 has a percentage error of 10.4815% and Sensor Cahaya 2 has a percentage of error 7.2756%. While for testing the success of the system classification of 66.66%. But the system can not to be said good because the daylight testers the success rate of 33.33%.

Keyword :ANN, Arduino Mega 2560,LDR,Sensor Cahaya