

Abstract

The development of technology at this time, the use of electrical energy has become a primary need, especially in the use of lighting, but the population in Indonesia still has excessive use of lighting energy, such as during sleep. In this case, it results in excessive and less efficient consumption of electrical power. With these problems, in this final project will be built smartlighting based on sleep monitoring data using the ANN algorithm. The system is designed to provide the amount of lamp power expenditure, so that users can control the lamp properly and the power used by the lamp is optimal. This sleep monitoring data is taken using the Fitbit Alta HR 2, the data will then be preprocessed, so that it can be easily applied to the ANN algorithm. Based on the test results, smartlighting can control the lamp so that the lamp power usage can be calculated. The ANN model is implemented to control the lamp with an accuracy of 64.89%.

Keywords: Smart Lighting, Fitbit Alta HR 2, ANN, Preprocessing