

Abstract

This paper discusses automatic lighting systems to make energy efficient. All equipment in daily needs mostly use electricity as a primary source. Increasing time also increases the electrical energy needed. Use too much light at night when there is no activity for example. To reduce this problem, an Arduino Uno microcontroller-based lighting system will be created which will detect the number of people around the lamp by using an LDR module so as to minimize the waste of electrical energy. The data generated is then processed using the Fuzzy Logic method so that it will produce a lamp that fits the number of people. Therefore the use of electricity can be efficient and save on electricity bill payments. Based on tests that have been carried out in this study, the total success rate of all sensors for precision is 97.27%, recall is 79.15%, and accuracy is 86.54%.

Keywords: LDR module, Arduino Uno, Fuzzy Logic, people detection