Reduction in Street Light Power Consumption

The National Institute of Engineering, Mysore/ 1ST SEM/ E&E - A Section

PROBLEM STATEMENT

The amount of power consumed by street lights in a year is ⅛ of the global energy produced. Most of this energy is wasted in unnecessary illumination - that is, street lights stay ON even in the absence of people or vehicles.

TEAM MEMBERS

Chandana N R
Anagha U
Pallavi M R
Kruthik bhushan H N
Manoj CN

INTRODUCTION

In any developed or developing country, one of the major areas of power wastage is public lighting. The amount of power consumed by street lights in a year is ⅛ of the global energy produced. Most of this energy is wasted in unnecessary illumination - that is, street lights stay ON even in the absence of people or vehicles.This is a depletion of energy and capital. Therefore, it is inevitable for the government to implement an automated street lighting system that enables efficient power consumption. An energy-efficient power generating system is implemented in this proposed model that automates street lights based on traffic density. Traffic density is a measure of the number of vehicles that pass a particular area over a period of time. Based on this information, we propose a smart upgrade to the street lighting system.

IDEA GENERATION

The street lights will be turned on or off with the help of LDR, which depends on the sunlight. Later in order to save the power, we have used the ultrasonic sensor which helps in increasing the intensity of the street lights only when the vehicles are passing through, rest of the time, street lights will be on with very low intensity thereby saving the power. We have coded the program using arduino.

PROTOTYPE IMAGES