



ISSN(Online): 2320-9801  
ISSN (Print) : 2320-9798

# International Journal of Innovative Research in Computer and Communication Engineering

(A High Impact Factor, Monthly, Peer Reviewed Journal)

Website: [www.ijircce.com](http://www.ijircce.com)

Vol. 5, Issue 12, December 2017

## Smart Lighting in Street Lights Based On IOT

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**ABSTRACT**-The Internet of Things (IoT) is changing human lives by interfacing regular questions together. A Street light is a source of light on the edge of a road which turns on around evening time for the comfort of individuals. A significant advantage of road lighting incorporates: prevention of mishances and increment in safety. Now- a-days Street light have turned into an imperative angle including street safety. A great deal of power is consumed by road lights. So it is basic to save the power as much as we can. The cost of power keeps on expanding as wastage of energy increments. It has turned out to be exceptionally critical for saving power. Road light checking control is a automated framework intended to improve the efficiency via automatically controlling the switching of road light. This task describes another new solution for road light control framework. It consists of wireless technology.

**KEYWORDS:** LDR (Light Dependent Resistor), WSN (Wireless Sensor Network), IoT(Internet of Things), GSM(Global system for mobile communication), Sensors.

### I. INTRODUCTION

Because of the increase of natural concerns, lighting control frameworks will assume a critical part in the reduction of energy utilization of the lighting without obstructing comfort objectives. As specified the energy is the absolute most imperative parameter to consider while evaluating the effects of specialized frameworks on the earth. Vitality related discharges are in charge of around 80% of air emanations and vital to the most genuine worldwide natural effects and risks, including atmosphere change, corrosive statement, brown haze and particulates. Lighting is frequently the biggest electrical load in workplaces; however the cost of lighting vitality utilization is low when contrasted with the work force costs. Accordingly its vitality sparing potential is frequently disregarded. As indicated by examine worldwide lattice based power utilization for lighting was about 2650 TW in 2005, which was a likeness 19% of aggregate worldwide power utilization. European office structures commit around half of their power for lighting, while the offer of power for lighting is around 20-30% in doctor's facilities, 15% in processing plants, 10-15% in schools and 10% in private buildings. Intelligent lighting control and vitality administration framework is an ideal answer for vitality sparing, particularly in broad daylight lighting administration. It understands remote on/off and diminishing of lights, which can spare vitality by 40%, spare lights upkeep costs by half, and draw out light life by 25%. The framework application in streetlight control for every light will decrease in streetlight power and support cost, and increment accessibility of road light.

This system will monitor the light intensity and on the basis of monitored intensity ny LDR street light automatically on or off. Camera used in this system of surveillance purpose to kept the record of passing vehicles from street light. If any fault occurs in street light then by using GSM message send to the street light management department that the street light becomes faulty. Alcohol sensor used to detect the level of alcohol taken by driver when vehicle pass from the street light alcohol sensor automatically detect the present age of alcohol level. Because of this system energy gets saved as well as accident may avoid due to street light faults.

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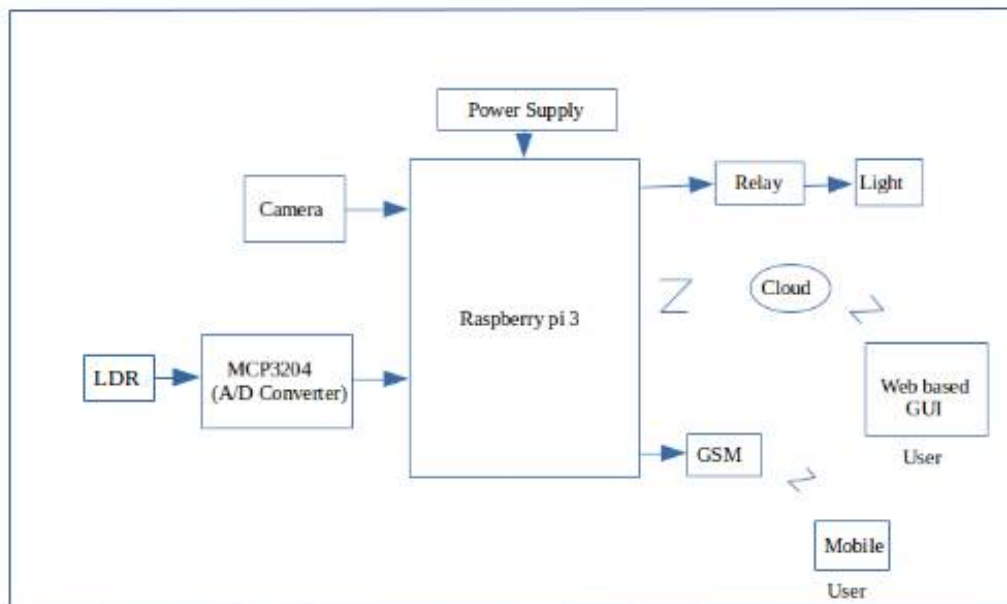
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## II. RELATED WORK

Some research work has been published in recent years related to smart street light. There were various ideas given by different papers. Some of papers suggested about zigbee network but zigbee is used for short range purpose so it cannot be used in our project. Sensors are explained in some research paper which we are going to use in our project and implement some advance system. There are more designs and models of smart street light in the last years [7]–[9], but none of them included novel ideas.

## III. PROPOSED SYSTEM

In proposed system, system will monitor the light intensity and on the basis of monitored intensity of LDR, street light automatically on or off. Camera used in this system of surveillance purpose to kept the record of vehicles passing from street light. If any fault occurs in street light then by using GSM message send to the street light management department that the street light becomes faulty. Alcohol sensor used to detect the level of alcohol taken by driver when vehicle pass from the street light alcohol sensor automatically detect the preentalcohol level. Because of this system energy gets saved as well as accident may avoid due to street light faults.



### DESIGN GOALS

- The aim of the implementation is to demonstrate that the automatic streetlight controlling can be used to save energy.
- This system will save the energy with automatically on or off light depending on day or night light intensity.
- This system also sends the text message to the streetlight management department when any fault found in streetlight working.
- The cost significantly reduced because sodium vapor lamps are replaced by LED energy is consumed more.
- Camera used in this system from surveillance purpose i. e. Used to kept record of passing vehicle on road.



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## IV. CONCLUSION

In this paper, we propose the system used to automatically on or off street light. As the LED bulbs are used, it emits less heat when compared with mercury lamps. This system cuts down the cost of conventional system by 50-60% which improves the economy of the country and saves a huge amount of investment as it can be utilized in useful ideas. This system makes the easy way to reduce manual work of on/off street light. System also send the message to street light management department if any fault occur in the street light so it will repair within less time and reduce accident happen due to darkness produced on road way because of faulty street light. Camera used for surveillance kept the record of passing vehicles from street. If any misbehavior happen on street light we get the details of it using camera. Alcohol detection sensor used to detect the level of alcohol detected from vehicle passing Through Street light. This system based on IoT platform so it is easy to see the record taken by camera anywhere anytime within world.

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