

Auto Intensity Control of Lights

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ABSTRACT

This project is all about to control the power consumptions at the streets and eliminating manpower. This includes controlling a circuit of street lights with specific sensors, LDR and microcontrollers during day and night. The aim is to design and develop a control system based on an electronically controlled automatic Street Light and head light controller by using LDR Sensor is called "AUTO INTENSITY LIGHT (DIM/BRIGHT) CONTROLLER". Auto Intensity Street and head light (dim/bright) controller consists of LDR sensor circuit, Control Unit, Dim/bright light and frame. The sensor is used to detect the opposite side vehicle (Light Beam) on the path. There is any obstacle on the path, the sensor senses the obstacle (Light Beam) and giving the control signal to the Dim/bright Light.

I. INTRODUCTION

We need to save or conserve energy because most of the energy sources we depend on, like coal and natural gas can't be replaced. Saving power is very important, instead of using the power in unnecessary times it should be switched off. In any city "STREET LIGHT" is one of the major power consuming factors. Most of the time we see streetlights are on even after sunrise thus wasting lot of energy. Over here we are avoiding the problem by having an automatic system. "HEAD LIGHT" performance has steadily improved throughout the despite only 25% of traffic travelling during darkness by these road accidents at night time increases day by day. Around 33% of the traffic accidents are mainly attributed to the impairment in vision caused by the glare of impending headlights during the night travel.

II. METHODOLOGY

Street lights work automatically with the use of a photo electric cell when it gets dull light will turn on the photocell has a light sensitive resistor as it gets dark it shorts out and causes a heater to operate inside and bimetal strip contact bend with heat and makes the circuit!

This project is built around the popular Arduino microcontroller. Automatic headlight brightness control circuit switches brightness the headlight from high beam to low beam when light from oncoming vehicle strikes the LDR of the vehicle. It holds the lights on the upper beam until the vehicle approaches from the other direction with increased brightness. Also the moment the car passes by, it shifts automatically the headlight back to upper beam with lower brightness.

WThe traditional implementation and organization of street lighting have no possibilities for improving and development any more. The dynamic changes in economy, energy supplies and ecology on national, Indian and world like scale require an automatic, adequate modernization of street lighting. However, this would be possible only with a quite new functional conception which in fact means flexibility, automation, sdaptability of street lighting. Simultaneous ensuring of the conditions of safe traffic and decreasing the energy consumption and operational costs could be realized in conformity with the constantly changing parameters of the environment. In conformity with the 24 hours change of daylight, the highly changeable traffic, the variable meteorological conditions and some extreme situations on the roads, the intensity of street lighting should change in a dynamic manner

Model and Material which are used is presented in this section. Table and model should be in prescribed format.

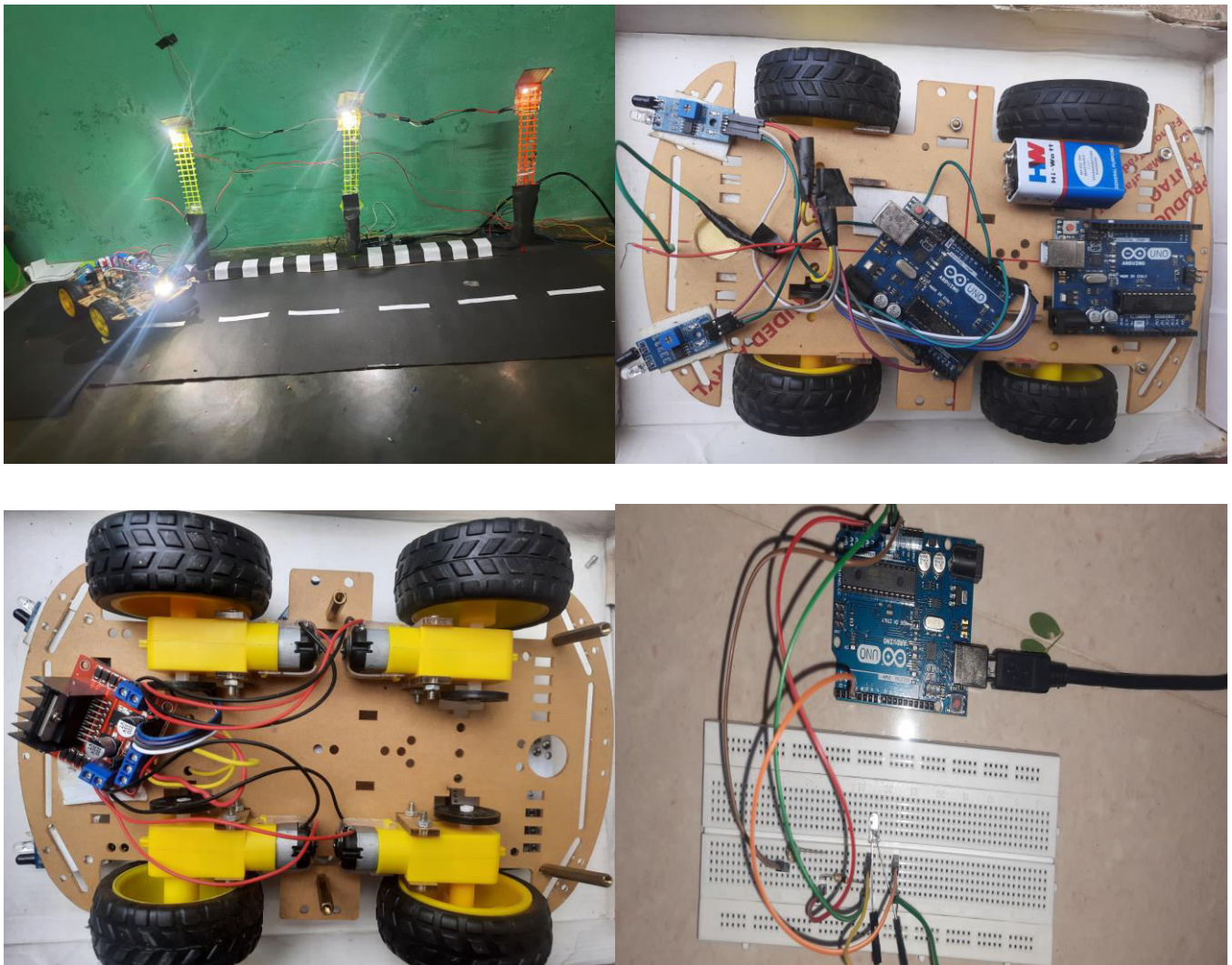


Figure1: view of building.

III. RESULTS AND DISCUSSION

- No man power required.
- Simple Construction.
- Efficient method.
- Less Consumption of electrical energy.
- Less maintenance.
- Cheap and economical.
- Light Sensors used have high sensitivity and are Easily implementable.

IV. CONCLUSION

Use of these automated head lights results in convenience to the driver while driving at night. The same principle can be used in automatic street light so that manual switching is avoided. This Arduino based project will provide a competent method for lighting systems and make the whole process of energy saving easier and efficient. With a capability to change the amount of light emitted depending upon the outside condition is no doubt an innovation with many future applications apart from the fact that it can also be used in many present day tech such as street light, park lights, industrial lights and many more. The usage of the smart lighting system will undoubtedly change the world that we see today.

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