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¹First Author Department & College

²Second Author Department & College

³Third Author Department & College

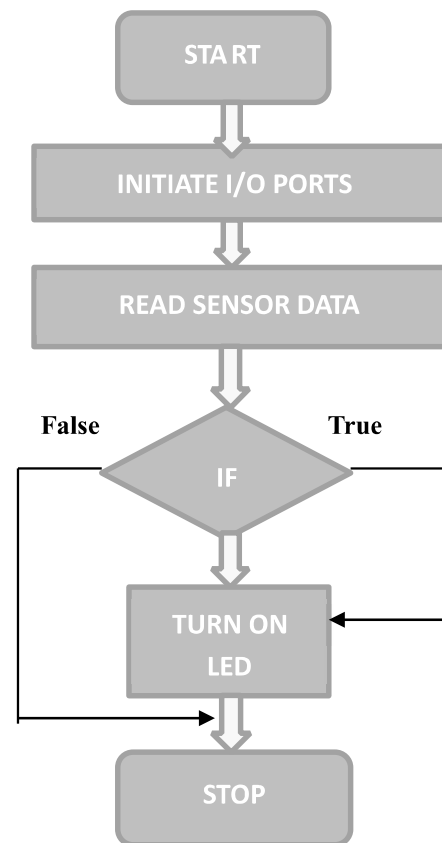
Abstract

The "Vehicle Movement Based Street Light With External Light Sensing" project proposes an intelligent street lighting system that utilizes both vehicle movement and external light conditions to optimize energy efficiency and enhance road safety. The system employs sensors to detect the presence of vehicles on the road and adjusts the brightness of the street lights accordingly. Additionally, it incorporates an external light sensor to regulate the brightness of the street lights based on ambient light levels, ensuring optimal illumination without unnecessary energy consumption. By dynamically adapting to the surrounding environment and traffic conditions, this smart street lighting system aims to contribute to energy conservation, reduce light pollution, and improve overall road safety.

Key Words : Automation, streetlights, sensing, IR sensors intensity, vehicle movements,

sustainable urban infrastructure solutions, ultimately improving the quality of life for residents and enhancing the overall efficiency of public services.

Flow Chart



1.INTRODUCTION (Size 11, Times New roman)

In urban areas, street lighting plays a crucial role in ensuring safety and security for pedestrians and motorists alike. However, traditional street lighting systems often lack efficiency, as they operate based on fixed schedules or rely solely on ambient light levels. This can result in energy wastage during periods of low activity or unnecessary illumination during daylight hours.

To address these shortcomings, we propose a novel street lighting system that integrates both vehicle movement detection and external light sensing capabilities. By harnessing advanced sensor technologies and smart control algorithms, our system aims to optimize energy usage while maintaining adequate lighting levels for road users.

This paper outlines the design, implementation, and evaluation of our vehicle movementbased street light system with external light sensing. We will discuss the underlying principles, components, and operational mechanisms of the system, along with its potential benefits in terms of energy efficiency, cost savings, and environmental impact.

2. Body of Paper

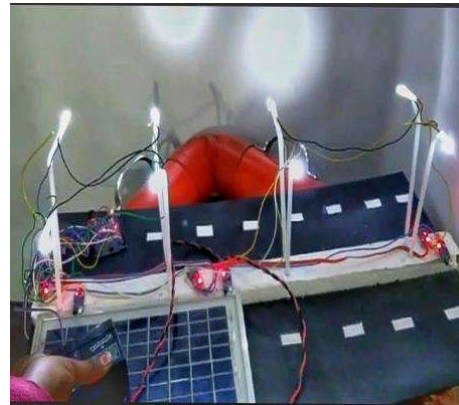
The body of paper consists Through this research, we hope to contribute to the development of smarter and more

Algorithm

ST-1: Start
 ST-2: Initiate the I/O Ports
 ST-3: Read sensor data to check conditions
 ST-4: It will check conditions which is to be applied If
 IR==1 Then LED gets turn ON
 ST-5: If IR==0 Then it exist from the loop
 ST-6: Stop

Result & Discussion

Fig -1: Figure

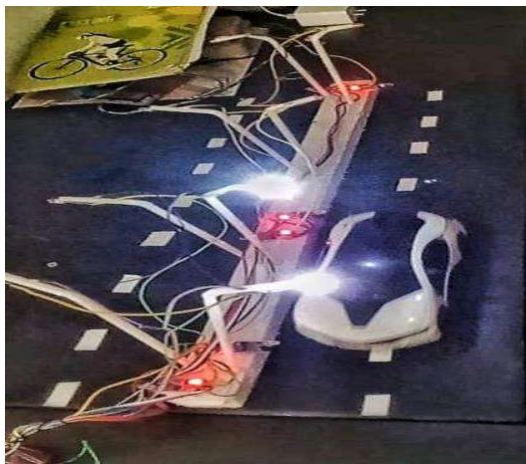


Initial Setup Phase

It depicts the initial setup of the hardware. All the components are in accordance to every other component. The five IR sensors are placed next to each other. The Arduino board is about to be mounted and connected to the external power supply for the flow of current. All the IR sensors are going to be connected to the Arduino board. All the wirings with the breadboard are installed.

Operation Phase

Fig. shows that fourth IR sensor detects the object and glows the corresponding LED and the successive LED with full intensity keeping rest of LEDs lit dimly.



3. CONCLUSIONS

The implementation of a vehicle movement-based street light system with external light sensing offers several benefits. By integrating sensors to detect both vehicle movement and external light levels, the system can efficiently manage energy consumption while ensuring adequate illumination for pedestrians and drivers. Additionally, such a system can contribute to reducing energy waste and carbon emissions, thus promoting sustainability and environmental conservation. Furthermore, the integration of smart technology enhances overall safety and security by providing timely illumination in response to varying environmental conditions and traffic patterns. Overall, this innovative street light system represents a significant step towards creating smarter, more efficient urban environments.

ACKNOWLEDGEMENT

It involves recognizing the presence of vehicles through sensors or cameras and adjusting the street lights accordingly to optimize energy usage and enhance safety. This acknowledgment can be in the form of a signal or feedback loop indicating that the system has detected and responded to vehicle movement.

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BIOGRAPHIES (Optional not mandatory)

1'st
Author
Photo

Description about the author1 (in 5-6 lines)