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IMPLEMENTION OF ANTIGLARE HIGH BEAM AND BENDING LIGHTS FOR VEHICLES

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Abstract: Due to the many accidents in our diary life, we are IMPLEMENTION OF ANTIGLARE HIGH BEAM AND BENDING LIGHTS FOR VEHICLES .to improper use of high beams can cause glare interference to oncoming drivers or pedestrian. The accidents can be avoided by incorporating Steering Control Headlight Mechanism.

Keywords: Sensors, high beam, bending lights.

I. INTRODUCTION

To avoid accidents occurring at night due to improper lighting condition especially at the cornering of roads and highways also design and fabricate a simple steering controlled automatic headlight system that is related to the arrangement of the headlight. [3] In order to avoid poor visibility and improper illumination of the road, this prototype is designed. There are high beams that brighter and project a symmetrical beam to illuminate the road ahead for a longer distance. Low beam is for city driving where they are street lights, high beam are for dark roads.

The headlight intensity, angle control are the main aim of adaptive headlight system. Cornering lamps function is activated when turning. Depending on the steering angle, the headlamp swivel left or right, or the fog light.

Our project is to make new and modern directional headlights in efficient manner by increasing the light angle. To provide improved lighting especially for cornering and by converting beam.

II. OBJECTIVES

- The cornering lamp function is activated when turning.
- Depending on the steering angle, the fog lights swivel left or right.
- It increase safety in the dark or while driving in poor lighting conditions.
- Improved driving safety at night will be achieved by avoiding glare interferences with adaptive high beams.

III. LITERATURE SURVEY

Title: Adaptive Head light System for Automobiles.

Authors: AishwaryaJ, AmruthaR, Dhanalakshmi MS.

It is done using adaptive headlights are an achieve safety feature designed to make driving at night or in low lights conditions safer by increasing visibility around curves and over hills it is controlled the angle of the headlight and controlled the intensity of the headlights. The main purpose of this system is to present to illuminate blind spots while drivingand prevent accidents.

Title: Automobile Cornering Lights Using Steering Mechanism.
Authors: Kona BalaBhanu, Bongu Bhavani, Mukkamala Girish Kumar, Sheik Khasim, Dilip Kumar Choudhary, Dr.Ramana Babu.

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This is done by connecting headlights and steering. Present day automobiles don't have effective lighting system. Due this many accidents are taking place during night times especially in that section. The accidents can be avoided by incorporating Steering Control Headlight Mechanism. The cornering lamps function is activated when turning, it helps increasing safety in dark.

Title: Anti-Glare Headlamp a Safe Option for Better Vision to the Rider.

Authors: Shrinivas S. Metan, Abhishek R. Kshirsagar, Govind N. Samleti, Vinayak K Patki

The antiglare headlamps are one in which helps to drive safely at the night time .The anti-glare film that reduces glare and halos around the headlamp light at night and eliminates unattractive reflections on the eyes. It used to reduce the glare of the light. This is important as too much lighting has been shown to affect your eyes and reduce nighttime visibility.

IV. METHODOLOGY

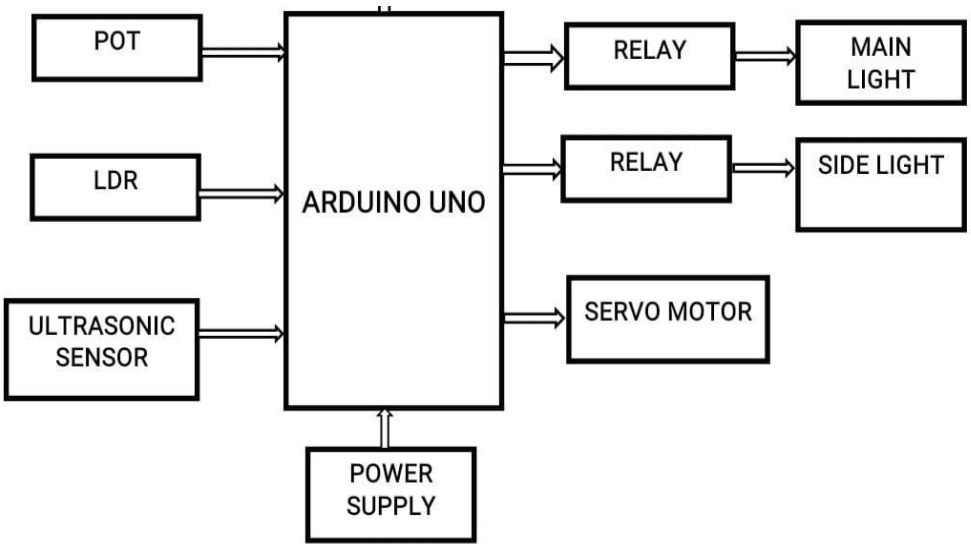

FIGURE 1: BLOCK DIAGRAM OF ANTIGLARE HIGH BEAM AND BENDING LIGHTS FOR VEHICLES

By this figure1 we are coming to see the antiglare high beam and bending light for vehicles. By using the ultrasonic sensor will detect the object or oncoming vehicles than it converted into high beam to low beam .Whenever a Vehicle is intending to make a turn; it will stop at the intersection and turn on the indicator.

Intended turn for the direction, the system recognizers the driver's intent and it turns that side headlights to the intended direction. Only the headlight. On the side on which the turn is intended is rotated. The Other headlamp still points in the direction of Vehicle facing thus Visibility well as maintain increasing it on the road.

The turn indicators are simulated by of push buttons and the Servo motor rotates the headlamp. When going through a Curve the headlamps still directed along the Vehicle line. This leads to tower, Visibility along the Curve, Especially during Sharper turns.

The system read the Steering input given by the driver which helps the System determine the curvature of road .In proportion to the Steering input the System rotates the headlamps toward the Curve Improving the Visibility of the road and aiding the driver. The steering position as this will enable .The Pot is used as Steering wheel as the resistance of pot Varies. The steering angle and Control the direction of headlamps.

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V. RESULTS

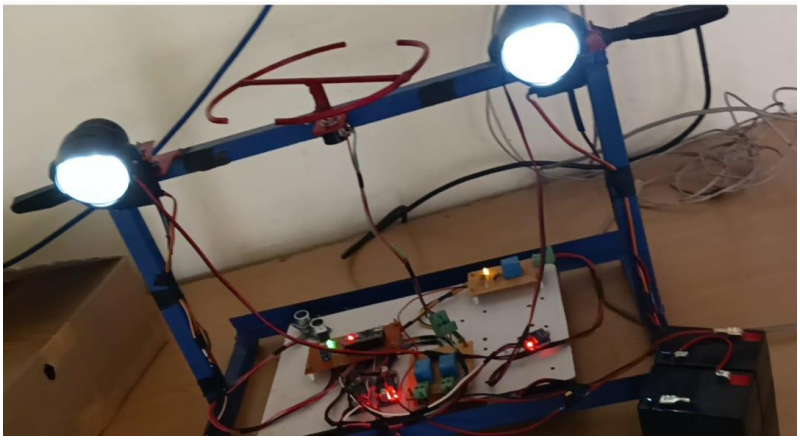

Figure 2: Designed Prototype Model

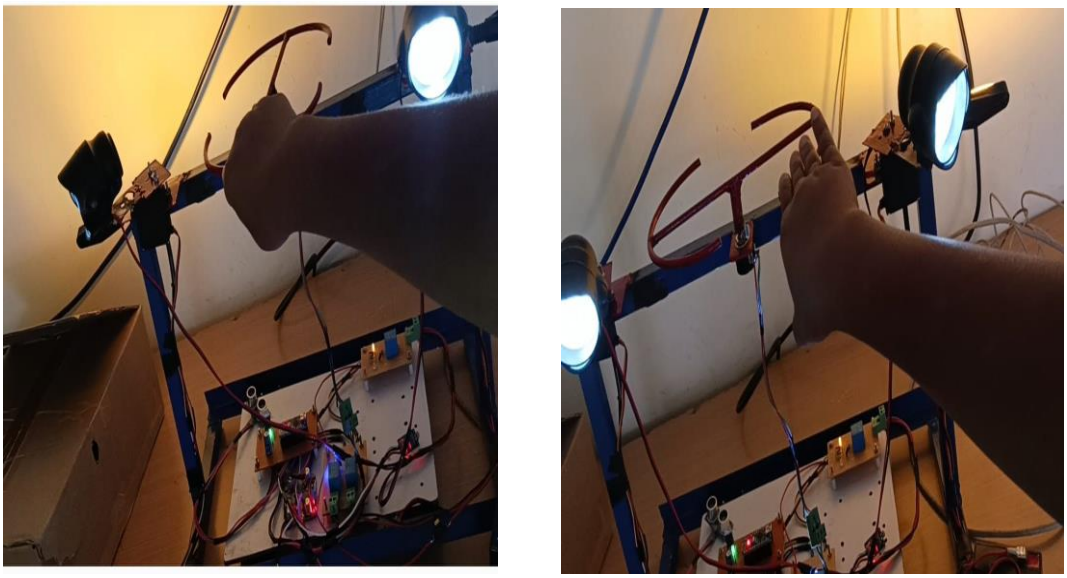

Figure 3: Bending Lights while turning a Steering Wheel

Figure 4: Converting High beam to Low beam

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VI. CONCLUSION

Implementation of this device in existing vehicles would reduce the accident during the night. Drivers would be easily able to drive during the night. No more eye problems from high beam lights of vehicles. and carrying out test with the project vehicle has proved that this concept works and although such lights are not widely used even nowadays, it does support the driver's vision during night-time driving, helps to reduce black spots while cornering and therefore reduces the risk of accidents, by helping to notice persons or objects hidden in a bend earlier in advance. We are looking forward to see more road vehicles equipped with directional headlights in serial production

VII. ACKNOWLEDGMENT

We especially want to thank **Niveditha B S** (Associate Professor of the Department of ECE, East West Institute of Technology), who provided us the chance to work on this fantastic project and conduct a lot of research. We also like to thank the professors of electronics and communication engineering whose advice helped us overcome many challenges that seemed insurmountable.

REFERENCES

[1]. Raghavendra L R, Shivaraju K H, Sneha B K, Sushma S, Suresh M V, "An embedded based smart advanced vehicle monitoring system", International Journal of Advance Engineering and Research Development May- 2018.
[2]. Snehal G. Magar, "Adaptive Front Light Systems of Vehicle for Road Safety"2015 international Conference of Computing Communication Control and Automation, PP: 551-554 (IEEE2015).
[3]. Pablo Fernandez, Luis Miguel Bergasa, Pedro Jimenez, David Fernandez, MA sotelo, SS Mayoral, "Automatic Light Beam Controller for Driver Assistance", International Association of Pattern Recognition, ISSN:0932-8092 Volume-22, Issue-5 September2011.
[4]. N Keerthi, Venkat Ajay Kumar, Deepthi, "Design and Fabrication of Solar Powered Automatic Headlight Brightness Controller", Managers Journal on Mechanical Engineering Volume-5 Issue-2 February April2015.
[5]. Pengfie Song, Yang Zhang, Xianglong Wu, Yufan Lan, "Design and Implementation of the Adaptive Control System for Automotive Headlights", 2013 Third International Conference On Instrumentation, Measurement, Computer, Communication andControl.
[6]. Mr. Sanal K S "Hierarchical Automobile Communication Network using LIN Subnet with VI based Instrument Clusters and OBD-II Regulations" Volume 1, Issue 3, April2012.
[7]. Priyanka Dubal,"Design of Adaptive Headlights for Automobiles" International Journal on Recent and Innovation Trends in Computing and Communication, Vol. 3 Issue. 3, pp 1599 -1603(MARCH2015).
[8]. Harshal Mohite, Bhushan Mahangade, Maruti Gholase and Sharada Kattgihalimath, "Intelligent and Adaptive Headlight with Electronic Controlled Power Steering System (IAEPS)", 2015, International Journal of Current Engineering and Technology, Karnataka.
[9]. K.-H. Kim, D.-H. Yum, D.-K. Byeon, D.-Y. Kim, and D.-I. Lee, "Improving driver's visual field using estimation of curvature," in International Conference on Control, Automation and Systems (ICCAS '10), pp. 728–731, KINTEX, October 2010.