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Design and Fabrication of Emergency Braking System in Four-Wheeler

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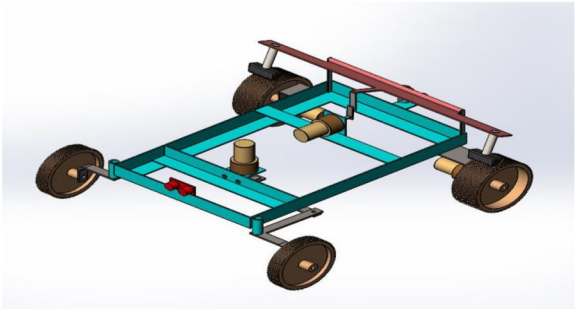
Abstract: ***Automatic Emergency braking system could also be braking system which helps to use brakes automatically under the condition of emergency and helps to mitigate the severity of a cash. This paper deals with the study of designing and dealing of automatic emergency braking system using the various fundamental of mechanical and electronic engineering popularly mentioned to as 'Mechatronics' during this technique ultrasonic sensor with combine use of stereo cameras will detect the obstacle before of the vehicle and it'll use relative distance between the obstacle and also the vehicle. The ECU will then judge if an accident is perhaps visiting happen or not and also the brakes are going to be applied automatically under this technique.***

I. INTRODUCTION

Thanks to advancement in automobile industry there is new technology available in market and Automatic braking system is one in all them. The automated braking system that automatically activates brakes when it necessary. By this method we are able to avoid accident. Volvo is that the 1st who introduced emergency braking system in 2009. The automated emergency braking system carries with it sensor such video infrared, ultrasonic sensor to scan for possible obstacle ahead of auto then use brake control to forestall accident.

A. Components

1) MS frame
2) Spring
3) Wheels
4) Brake shoe
5) Ultrasonic sensor
6) DC motor Integrated circuit



B. Advantages

1) This system can prevent collision of the vehicle with pedestrians
2) Reduce the injuries occurring
3) An ultrasonic sensor, cheaper and fewer of hardware than other forms of sensors presently Used.

C. Disadvantages

1) Drivers being lulled into a false sense of security if they become over- reliant on such System.
2) False alarms resulting in the system suddenly jamming on the brakes and shocking the Driving force.
3) As ideal would be when you're easing the car into a parking zone that has shrubs ahead of it. No driver wants to suddenly be shocked by such manoeuvres.

II. CONCLUSION

This project work has provide us an excellent opportunity and experience to use limited knowledge. We gained a lot of practical knowledge regarding planning, purchasing, assembling and machining while doing the project work. In conclusion remark of our project work, let us add a few more line about our project work. Thus we have developed an ' Design and Fabrication of Emergency Braking System in Four-Wheeler' which helps to know how to achieve low cost automation.

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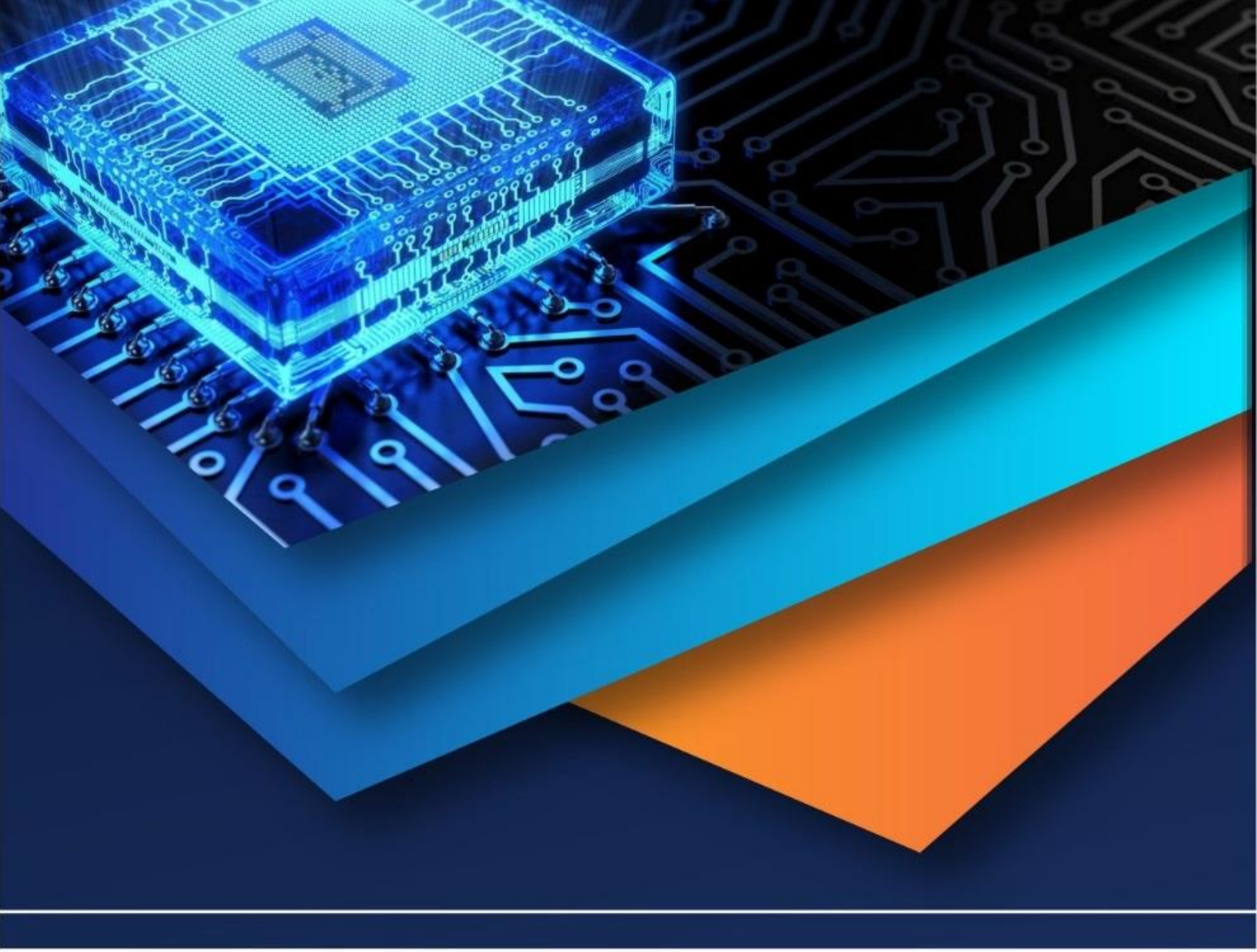

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