

# Collision Prevention System using Ultrasonic Sensor

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**Abstract:** *Now-a-days usage of automobiles is increasing. As Automobiles increasing the death rate due to road accidents is also rising. On an average, 450000 accidents take place every year in our country. accidents are mostly caused by delay of the driver to late applying of brakes or by the negligence by the driver. Most of the accident occurs due to the delay of the driver to hit the brake, so in this project work braking system is developed such that when it is active it can apply brake depending upon the object sensed by the ultrasonic sensor and speed of vehicle. Ultrasonic emitter always emits the ultrasonic waves, whenever a obstacle is detected then wave gets reflected and receiver receives the signal. Reflected wave sends the signal to the Arduino UNO microcontroller from that based upon distance of object it actuates the brakes. in this modern era speed is a major factor and leads to catastrophic incidents. So, by using Ultrasonic braking system we can prevent the death rate of road accidents.*

**Keywords:** Ultrasonic Sensor, Arduino, Microcontroller, Mechatronic System, Braking System

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