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Vehicle Over Speeding Detection

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Abstract: *Our proposed project aims to develop a system that detects cars driving at speeds over specified limit and inform concerned authorities immediately. Road accidents occurrences have increased recently so there needs to be a system that allows to detect over-speeding cars. Current speed detection systems are handheld guns held by police personnel that allow them to check car speed and then manually inform authorities about the vehicle. Whereas this proposed system does not need any human interception and records car speed as well as wirelessly informs authorities of over-speeding detections. The system first calculates the time required by the specific car for moving from first point to the second. Based on this data it calculates the car speed. This data is gathered and then transmitted by the system wirelessly to concerned authorities at a remote location. The mechanism consists of IT transmitter- receiver pair that work in combination for vehicle detection purpose. The microcontroller is now used to process this data and calculate the time required by vehicle to travel from one point to the other. Depending upon this time it now calculates vehicle speed as well as displays this on an LCD display. The system also sends this data wirelessly. It sounds a buzzer alarm if an over speed vehicle is detected. Over speeding of vehicles is the major cause of accidents in recent times. Monitoring of such over speeding vehicles especially on highways is of prime importance. Many manual methods are being used to detect the over speeding vehicles by traffic control team. However, these methods require lot of man power and continuous monitoring by traffic personnel. In this study, an attempt is made to develop an automatic speed monitoring system, which provides a simple way to monitoring speeds of all the vehicles from a centralized control room. This system calculates the instantaneous speed of vehicle with help of sensors and the over speeding vehicle is detected using an image processing technique using Python programming language. The developed model is validated with real world traffic data and comparative analysis of speeds obtained by manual method and developed model shows that model truly represents the field condition.*

Keywords: Handheld Guns, IT Transmitter – Receiver, Buzzer Image Processing Technique.

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