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Vehicle Accident Prevention and Detection System

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Abstract: The main aim of this paper is to develop a unique method to reduce the probability of vehicle (Two wheeler or four wheeler) accidents and drunken drive cases, driver drowsiness and brake failure conditions. Accidents due to driver drowsiness can be prevented using eye blink sensors. The driver is supposed to wear the eye blink sensor frame while driving. The MQ3 sensor detects the content of alcohol in the driver's breath. And also by using the line brake sensor, it can detect the brakes failure of vehicles and provides engine locking in such conditions. Here is a small effort to prevent road accidents. This vehicle accident prevention system is implemented. When the driver or rider crashes the vehicle, the sensor detects the motion and tilts of the vehicle reports the occurrence of an accident. By using the GSM and GPS technology the information will be sent to the ambulance or corresponding family members of the driver with the location of an accident place.

Keywords::Arduino, GSM and GPS modules, Eye blink sensor, Alcohol detection, Accident detection, Mobile phone.