

IoT Based Smart Car Monitoring System

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Abstract: Due to the rapid increase in vehicles on the road, the probability of road accidents is rising steeply. Drunk driving is considered a major cause of road accidents worldwide. The main aim of this project is to develop a system that detects the amount of alcohol consumed by the driver. The proposed system aims to prevent the driver from operating the vehicle while intoxicated, thereby reducing the number of accidents caused by drunk driving. Additionally, it ensures that the driver wears a seatbelt. The system also includes an automatic headlight dim-dip control, which prevents the bright beam of light from disturbing oncoming vehicles. It features brake failure detection, which will identify brake failure and automatically slow down and stop the vehicle. The proposed model is developed using an Arduino Uno, with an alcohol detection sensor, brake failure sensor, and seatbelt sensor as its major components. As a safety measure, when the alcohol level exceeds a permissible limit, the vehicle's ignition system will be turned off, and the concerned authorities will be alerted via an IoT module.

Keywords: IoT