Intellect Drive using IoT

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Abstract: *In recent years, Integration of IoT technologies in vehicles has significantly improved safety and security features. This paper presents a review of IoT-based systems for enhancing safety in automobiles, focusing on alcohol detection, smoke detection, fire detection, anti-sleep alarm, and GPS tracking. For alcohol detection, various sensor machinery like infrared (IR) spectroscopy, semiconductor sensors, and fuel cell sensors are utilized to detect alcohol levels in the driver's breath or cabin air. These photoelectric cell are integrated into vehicle's ignition system, preventing the vehicle from starting if the alcohol level exceeds the legal limit. Smoke detection systems in vehicles use IoT-enabled smoke sensors that monitor the cabin for any signs of smoke. These sensors can prompt an alarm, alerting the driver and passengers to evacuate the vehicle in a fire. Fire detection systems in vehicles utilize IoT-enabled heat and smoke sensors that detect abnormal temperatures or smoke levels, triggering an alarm and notifying emergency services if necessary. To prevent driver drowsiness, anti-sleep alarms are assimilated into the vehicle's steering wheel or seatbelt, monitoring the driver's behavior for signs of drowsiness. These alarms can alert the driver with sound or vibration, prompting them to take a break and avoid accidents. GPS tracking systems in vehicles use IoT automation to track the vehicle's location in real-time, providing accurate positioning information to the driver and authorities in case of emergencies or theft*

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