Here’s The Latest Technology That Will Make Driving Safer

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In brief

New car safety technologies highlighted at CES include driver monitoring systems that track facial cues for distraction, adaptive cruise control with hands-free driving like Cadillac’s Super Cruise, advanced road detection using Lidar and Intel’s Mobileye for lane-keeping and collision avoidance, vehicle-to-vehicle com.

In the annual Consumer Electronics Show (CES) held in Las Vegas highlighted the latest car technologies expected to prevent injuries and damage caused by road accidents. Along with self-driving car technology, technology to avoid collisions of the vehicle is also being developed.

Some of these developments have already been implemented in different car types and brands worldwide, while others will be integrated with the next generation of vehicles. Meanwhile, the US federal government is also working with multiple government agencies to finalize the standards for autonomous or self driving vehicles to ensure that they’re safe. Here are some of the best tech which will make driving safer.

Driver Sense system

Cipia, formerly known as Eyesight Technology, has developed the Driver Sense system wherein a camera analyzes the driver’s facial features. Blink rate, yawning, and smoking are some of the actions which are monitored. A warning is generated if safety norms are violated.

This type of tech will benefit Europe since the European Commission has made it mandatory for new car models and makes that includes driver monitoring, speed limiters, and other safety features in new cars manufactured after 2022. This year, those in the market for a new vehicle should look for these new tech features while shopping for a new ride.

Recently, it was announced that the China-US OEM Joint Venture had selected Cipia’s driving monitoring system for five upcoming car models. Production on the new cars with the Driver Sense feature is slated to begin in the first half of 2022.

Adaptive cruise control

The Super Cruise feature of the Cadillac CT6 incorporates adaptive cruise control, which slows down the vehicle based on the vehicle’s speed in front. The camera also monitors the driver’s eye movements to check if the driver is paying attention to the road ahead.

A green light is automatically switched on if the driver is distracted. Apart from the 2018-2020 Cadillac CT6, this feature is also available in the company’s other car models, including the 2021 Escalade, CT4, and CT5.

Cadillac has tapped celebrities such as Sofia Vergara and her husband Joe Manganiello, the Jonas Brothers, and Tiffany Haddish to test the Super Cruise feature while driving the Next Generation 2021 Escalade. Vergara and Manganiello's test drive, which racked up over three million views on YouTube, demonstrates how easy it is to activate the Super Cruise feature.

To use, one must press the Adaptive Cruise Control button on the steering wheel. Once the feature detects that you're on the road with lane markings and that GPS is available, the Super Cruise symbol will then light up. Upon pressing the Super Cruise button, the driver can now take their hands off the steering wheel. This feature can be disengaged by pressing the Super Cruise button again or by stepping on the brakes.

More accurate road monitoring

Radar or cameras are used to detect items around the vehicle, and this tech is currently available in most new cars in the market. However, the most advanced systems use light ranging and detection, abbreviated as Lidar. Though Lidar is too expensive to be implemented commercially at present, it is very accurate, according to Aeye, a California company that develops similar technology.

Meanwhile, the Mobileye tech from Intel also incorporates a lane-keeping feature for US cars, which identifies the lane where the car is located. Moreover, this tech feature can anticipate possible collisions with pedestrians, other vehicles, cyclists, animals, debris, and other road obstacles. It can also recognize road boundaries and barriers, read directional signs and traffic signs and lights. This tech can be highly useful to keep elderly drivers safe and those who have slight hearing problems.

Vehicle to vehicle communication

The car communication system will allow the driver to receive, analyze information from networks, devices, and other cars in the area wirelessly. It will help drivers to get details about other vehicles on the same route they're taking. If the driver in another car is planning to drive or swerve in a particular direction, having this information will help prevent accidents or waste time in a traffic jam.

Some of the best tech and car companies are already joining forces to create new technology to enhance vehicle communication. For example, Honda and Verizon have recently teamed up and are researching how mobile edge computing and 5G can enable faster communication between vehicles, infrastructure, and pedestrians. Faster communication may allow vehicles to avoid hazards and collisions.

Moreover, it can allow drivers to find alternate routes to stay safe while on the road. Instead of relying on a car's computer to do the work, the 5G and MEC technology provide information, like speed, location, and other sensor info to the network, and the network informs the driver if there is danger up ahead or if there is a potential for an accident.

Autonomous parking upgrades

Even the most experienced drivers may have trouble parking in a tight space. Fortunately, gadgets such as backup cameras can help one park with ease in a tricky area. But soon, upcoming car models will also have unique features which will allow cars to park autonomously.

For example, Tesla's biggest rival, Xpeng, is about to install a software upgrade on its P7 car, which will allow the vehicle to learn up to 100 parking spots. This upgrade is called Valet Parking Assist, and once the software is in place, drivers can leave their car at the car park entrance, and the car will drive itself to a designated parking spot.

In addition, the Kia Sportage 2022 and the Kia EV6 are also slated to have a Remote Smart Parking Assist feature. This feature will allow drivers to remotely park their vehicle or exit a parking lot from outside the car using their key fob.

A large part of the auto safety technology is still under development and is undergoing tests to determine their performance and reliability in everyday driving situations. However, with the arrival of this brand-new tech, we can expect our roads to be safer in the coming years.

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