Driving Safety System — Accompany with the whole cycle of car use

This is a driving safety guarantee system that accompanies the whole cycle of car use, and can identify the status of the driver and passengers in the car through image AI technology. The system has functions such as in-vehicle character recognition and monitoring, DMS driving monitoring, emotion recognition, multi-modal interaction, driving behavior analysis, and car safety protection. The system can solve the safety problems of drivers and passengers in the car, improve the driver's driving experience and driving safety, and bring a safer and more convenient travel experience to the society.

In-car Occupant Identification and Monitoring

Child/Elderly/Pet recognition.
Automatic adjustment of car window/Child lock.
Reminder for child climbing/leaving the seat.

DMS Driver Monitoring System

Feedback on fatigue status/dangerous behaviors.
Multi-level and multi-channel feedback.
ADAS-assisted safe driving.

Emotion Recognition

Recognize user facial expressions and provide proactive care.
Alleviate road rage and other negative emotions.
Proactively recommend mood-enhancing playlists.

GET IN THE CAR

GET OUT OF THE CAR

Safe Guard When Leaving the Car

Security measures for children/pets left behind
Monitoring of vital signs in the car after leaving
Automatic activation of Child/Pet SafeGuard mode
Reminder for users on car/mobile devices.

Analyzing Driving Behavior

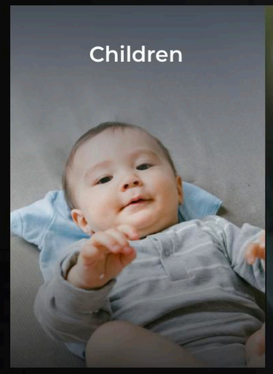
Identifying driving style.
Providing safety recommendations.
Collaborative scoring between human and machine.
Tailored driving suggestions.

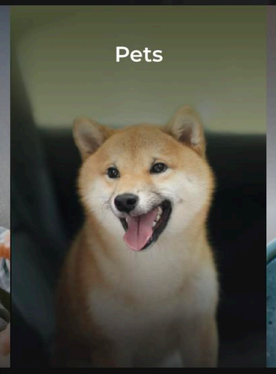
Multimodal Interaction

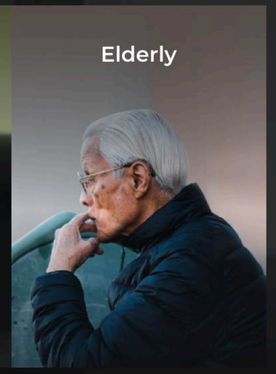
Supporting gesture and voice interaction.
Supporting multiple quick gestures.
Combining gestures and voice for interaction.

In-car Occupant Identification and Monitoring

The safety system automatically recognizes the roles of passengers getting in the car, including children, seniors, and pets. It adjusts the windows to a safe height and opens the child safety lock, preventing pets from jumping out of the window or children from accidentally opening the door, which could cause dangerous situations. During the ride, the system also monitors the status of passengers and alerts the driver if children are climbing or leaving their seats, ensuring a safe ride.







Driving Behavior Analysis

The Driver Monitoring System (DMS) ensures driving safety by monitoring the driver's behavior and identifying and alerting to potential safety risks. This includes monitoring for fatigue and dangerous driving behaviors, with alerts divided into three levels based on the degree of danger. Multiple channels of alerts, including sound, images, and hardware feedback, are used to cover the instrument panel, central control screen, and AR-HUD, thus reducing the risk of accidents and enhancing the driver's perception of the vehicle's status and driving safety, thereby enhancing driving safety.

Vehicle Safety Guard

After the car owner leaves, the in-car camera will scan for the presence of living beings inside the car. If children or pets are detected, the safety guard mode will be activated. By adjusting the air conditioning, the in-car environment will be kept comfortable, and the in-car footage will be sent to the car owner's phone.

DMS driver monitoring system

The DMS (Driver Monitoring System) is designed to monitor the behavior of the driver, identify and prompt potential safety risks to ensure safe driving. The system includes monitoring of fatigue and dangerous driving behaviors, with alerts categorized into three levels according to the severity of the danger. The system provides multiple-channel prompts through sound, image, and hardware feedback, covering instrument panel, central control screen, and AR-HUD, to enhance the driver's perception of vehicle status and driving safety, and to reduce the risk of accidents, thereby improving driving safety.

Drink water

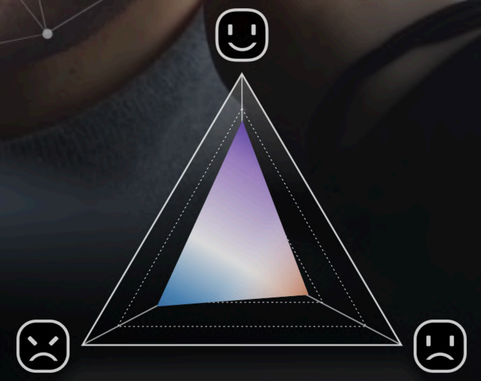
Yawn

Bow your head

Poor eye opening

Emotion Recognition

Emotion recognition is achieved through OMS, which identifies users' facial expressions and provides proactive care services based on their emotions. When negative emotions such as sadness or anger are detected, music playlist recommendations and chatbot conversations are offered to help users relieve negative emotions. For positive emotions, a comfortable and pleasant in-car environment is created for users through the combination of music and aromas, enhancing the emotional experience of users.



Multimodal Interaction

Gesture control allows users to perform precise control without touching the screen, reducing the difficulty of operation during driving. Gestures can be bound to certain functions, such as muting or switching music, which can be executed on any screen. Combining motion recognition with voice interaction enables more natural multimodal interaction. Users can interact with the car system through voice and gestures, reducing the learning cost and greatly improving interaction efficiency.

确认

翻页

光标

静音