Title : Drowsiness Detection for Drivers

Abstract:

Drowsy driving is a major cause of road accidents, accounting for up to 20% of all accidents. Driver drowsiness detection systems (DDDS) are designed to prevent these accidents by detecting the signs of drowsiness in drivers and alerting them to take a break. There are two main approaches to DDDS: vision-based and sensor-based. Vision-based systems use cameras to monitor the driver's face and eyes for signs of drowsiness, such as closed eyes, decreased blinking, and head nods. Sensor-based systems use sensors to monitor the driver's driving behavior, such as steering wheel movements, lane deviations, and reaction times.

DDDS have been shown to be effective in reducing drowsy driving. A study by the National Highway Traffic Safety Administration found that DDDS can reduce drowsy driving by up to 50%. However, there are still challenges that need to be addressed in order to improve the accuracy and reliability of these systems. For example, vision-based systems can be fooled by sunglasses or makeup, and sensor-based systems can be affected by environmental factors such as rain or snow.

Continued research and development is needed to overcome these challenges and make DDDS a more effective tool for preventing drowsy driving accidents.

RA2011003011052 Fazin Faizal