

ABSTRACT

Drowsiness when driving is a significant cause of road accidents, leading to severe injuries and fatalities. To address this problem, a novel IoT-based sleepiness detection system for drivers that employs a variety of sensors to detect drowsiness in real-time has been developed. Driver drowsiness is a major cause of road accidents, leading to injuries and fatalities. To prevent these accidents, we propose an IoT-based solution which monitors the rider's physiological and behavioral patterns using data from sensors such as IR-based eye blink sensors and heart rate sensors, and then analyzes this data to identify when the rider is sleepy. When sleepiness is detected, the system sends an auditory warning to the rider to stay awake. Additionally, the system sends a notification to the driver's family through a mobile app to ensure they are aware of the situation. This approach has the potential to significantly reduce the frequency of accidents caused by sleepy driving. Our proposed system provides a non-invasive and easy-to-use solution for detecting driver drowsiness. The use of IoT technology allows for real-time monitoring of driver behavior, ensuring prompt detection of drowsiness and preventing accidents. We conducted experiments to evaluate the accuracy and effectiveness of our system, and the results demonstrate its ability to accurately detect driver drowsiness. Overall, our proposed IoT-based solution provides an effective way to prevent road accidents caused by driver drowsiness, which can save lives and improve road safety.