

Title: Microsleep Detector System

Abstract:

In today's fast-paced world, driver fatigue is a significant cause of road accidents. To address this issue, we have developed a microsleep detector designed for use in cars. This device utilizes an ultrasonic sensor to monitor the distance between the driver's head and the sensor. If the distance exceeds 3 cm for more than 3 seconds, indicating potential microsleep, the device triggers an MP3 player to emit a loud scream sound, effectively waking up the driver. When the driver's head is within 3 cm of the sensor, the device plays calming music to keep the driver alert. Our innovative solution aims to enhance road safety by preventing accidents caused by microsleep.