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8th International Conference on Smart Computing and Informatics : Submission (478) has been created.

1 message

Microsoft CMT <noreply@msr-cmt.org> Fri, Mar 13, 2026 at 7:03 PM
To: pratya.nu@up.ac.th

Hello,

The following submission has been created.

Track Name: SCI2026

Paper ID: 478

Paper Title: Lightweight Computer Vision Model for Real-Time Drowsiness and Distraction Detection to Improve Driving Safety in Elderly Drivers

Abstract:
This study aims to develop a lightweight computer vision model to detect drowsiness and distraction among elderly drivers in real time, with a focus on Thai road safety. Risky behaviors develop gradually and are influenced by lighting, camera angles, and driving conditions. The prototype employs a frame-by-frame processing system combined with temporal analysis. It uses MediaPipe Face Mesh to extract 468 facial points for indicators of eye closure and yawning, and YOLOv8 Pose to evaluate head orientation. These outputs are integrated with hierarchical rules and temporal thresholds to improve event detection reliability and classify seven behavioral types, summarized by frame count, duration, and frequency. Testing on 12 in-car video clips showed that forward-looking behavior was most common, while downward gaze, eye closing, and yawning appeared sporadically and infrequently. The findings highlight the potential of temporal analysis for real-time risk detection on devices with limited resources.

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Secondary Subject Areas: Not Entered

Submission Files:
c.pdf (371 Kb, Fri, 13 Mar 2026 12:03:26 GMT)

Submission Questions Response: Not Entered

Thanks,
CMT team.