Nomination: 20555

DMS by VinAI

## Page: General Information

### Name of Organization / Company

VINAI ARTIFICIAL INTELLIGENCE APPLICATION AND RESEARCH JOINT STOCK COMPANY

### Logo

Download File (https://asiastevieawards.secure-platform.com/file/32439/eyJ0eXAiOiJKV1QiLCJhbGciOiJIUzI1NiJ9.eyJtZWRpYUlkIjozMjQzOSwiYWxsb3dOb3RaWduZWRVcmwiOiJGYWxzZSIsImlnbLogo-VinAI-fullcolor.png)

### Web Site Address

https://www.vinai.io/ (https://www.vinai.io/)

## Page: Entry Information

### Entry Title

DMS by VinAI

### Category

N01 - N07 - Award for Innovation in Technology > N01. Award for the Innovation in Technology Development > All Other Industries

### Submission Format

An Essay of up to 625 Words

### Essay

1. Driving the Future of Road Safety: VinAI's InteriorSense Driver Monitoring System

As the automotive industry moves toward safer, smarter mobility, Driver Monitoring Systems (DMS) have become essential. The EU has mandated DMS adoption under the General Safety Regulation (GSR) by 2026, and the U.S. is evaluating similar policies. With rising regulatory demands and consumer expectations for safer vehicles, automakers need solutions that are not only compliant but also adaptable and efficient.

Leveraging artificial intelligence, VinAI's DMS offers accurate, real-time in-cabin monitoring to enhance driver safety and help automakers optimize resources. The system detects signs of fatigue, distraction, and risky behaviors, ensuring a proactive approach to accident prevention.

2. Key Features and Core Technologies

VinAI's DMS is equipped with a comprehensive set of features to prevent impaired driving. Fatigue and Drowsiness Monitoring, based on Karolinska Sleepiness Scale (KSS) levels, detects prolonged eye closure, head nodding, and frequent blinking, enabling early intervention. Attentiveness Monitoring tracks a driver's gaze and head position to ensure sustained focus on the road. Phone Usage Detection and Smoking and Eating Detection recognize inappropriate in-vehicle behaviors that may reduce driver control. By integrating multiple monitoring functions, VinAI's system effectively addresses various real-world driving challenges.

At the core of VinAI's DMS is a set of advanced AI technologies to ensure accurate and reliable monitoring. Eye State Detection tracks open and closed eyes, even in low-light environments. Landmark Detection maps facial features for precise movement analysis, while Eye Gaze Tracking determines whether the driver remains focused on the road.

Additionally, Behavior Detection identifies distraction or drowsiness in real time, while 2D/3D Head Pose Tracking continuously assesses head position, detecting inattentiveness before it becomes a risk. These capabilities work in tandem to deliver comprehensive driver monitoring and issue timely alerts, preventing accidents caused by distraction and drowsiness.

3. Setting New Industry Standards with An Accurate, Accessible and Flexible Solution

VinAI's DMS is globally recognized for its accuracy. In 2020, the U.S. National Institute of Standards and Technology (NIST) ranked VinAI's face recognition system sixth among 430 global solutions in real-world applications. Further validation from an EU Tier 1 supplier benchmark confirmed that VinAI's system is among the top two worldwide, demonstrating its reliability and high performance.

Adaptability is another defining strength. Automakers need solutions that integrate seamlessly across different vehicle models. VinAI's DMS is available on the most popular SoCs in the automotive field, such as NVIDIA, Qualcomm, Renesas, and Ambarella. The system supports multi-camera positions, reducing integration costs and shortening time-to-market for OEMs.

Beyond compatibility, VinAI's solution is designed with efficiency in mind. By optimizing resource consumption, our system uses just one-third of the computing power required by existing solutions, making it viable for seamless integration into current ECUs in both electric and gasoline vehicles. This means automakers can implement our technology without costly hardware upgrades or reengineering vehicle models, significantly lowering investment costs while maintaining compliance.

With ever-evolving regulations, automakers must stay ahead of compliance requirements. VinAI's DMS is designed to align with EU General Safety Regulation (GSR) 2026, ensuring readiness for mandated in-cabin monitoring. It also complies with New Car Assessment Program (NCAP) 2024 benchmarks, providing manufacturers with a forward-compatible safety solution.

**For this category please provide**

An essay of up to 625 words describing the nominee's innovative achievements in technology since July 1 2022, **OR** a video of up to five (5) minutes in length illustrating the same.

Optional (but highly recommended), a collection of supporting files and web addresses that you may upload to our server to support your entry and provide more background information to the judges.

**Do You Have Supporting Files You Would Like to Upload?**

Yes

Audio (Mp3), Documents (PDFs, Word, PowerPoints), Images (PNG, JPG, TIF), and Video (Mp4)

200 MB Max per File

**File 1**

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**Do You Have Website URLs you would like to link to**

No

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