Case Study: edgetensor

Overview

Edge3ensor is a company based in Dallas, Texas USA, which provides real time state-of-the-art Driver Management and Identification System software. Their technology detects driver distractions, such as drowsiness and inattentiveness, along with detecting other driver activities to help mitigate risky driver behaviors.

Edge3ensor's in-cabin monitoring technology works on low-power hardware making it accessible to the mass market. The cross-platform solution is designed for Automotive OEMs and Tier-1s, and delivers high standards in terms of quality and performance.

Brodmann17's Solution for EdgeTenser:

- ✓ Cloud based and infinitely scalable and continuously upgraded
- ✓ Device agnostic: supports footage from new and legacy dashcam
- ✓ Performs the deepest analysis of video footage with no human review required
- ✓ Provides real-time insights to determine whether a driver's actions are justified
- ✓ Docker-based solution designed for installation in any cloud-based environment

With perception enabled cameras looking both inside and outside the vehicle, both driver behavior and external events can be monitored - and appropriate warnings can help mitigate potential problems and give the fleet operators the ability to improve their driver's ability. A combined ADAS/DMS solution contributes to increased road safety by reducing accidents and improving driving behavior.

> "Enabling the next generation of dash cams with real-time and accurate edge-based ADAS/DMS solutions, accompanied with event-based video analytics, will provide fleet service providers a one-stop-shop solution."

Rajesh Narasimha
CEO, Edgetensor

Benefits of Brodmann17's Solution for EdgeTensor

✓ **Comprehensive Driver Maneuvers Review:**
Cloud-AI analyzes and generates detailed information on every ADAS and DMS event performed by drivers.

✓ **Hardware-Agnostic:**
provides video analytics for non-AI cameras - most camera models in the market are supported.

✓ **Zero Manual Intervention:**
Automatic event and driver score reporting with no manual review required.

✓ **Simple Integration:**
into TSP cloud applications.

✓ **Scalable:**
to support the growing needs of any business.

Product Details

The solution provides an objective third eye. It is completely camera agnostic, analyzing any dash camera footage and providing instantaneous insights that are used to determine whether a driver's actions and behaviors are justified, as well as perfecting the ability to provide accurate driver scoring.

Dash cam footage analysis is performed by cutting-edge AI-based deep learning technology. With patented technologies, new events, such as rolling stop signs, congestion monitoring and driver ID, can be easily added to the real-time analysis through software upgrades without interrupting the production analysis.

ADAS events such as Forward Collision Warning (FCW), Lane Departure Warning (LDW), and Driver Monitoring events, such as distraction and phone-usage, formed the core of the Cloud-AI solution, which was subsequently supplemented with additional event detection and information to better meet the demands of TSPs and fleet managers.

Brodmann17 created a Docker-based solution designed for installation in any cloud-based environment, such as Microsoft Azure, Amazon AWS, Google Cloud, and other cloud platforms. The solution also supports both CPU and GPU-based environments. Several integration options can be supported - for example, either directly to VTSP cloud or via a third-party partner which provides cloud video processing services.

Dash cam videos are uploaded on a storage bucket such as AWS S3, Azure and Gcloud. The dash cam videos are accessed from storage bucket and metadata via API call. Cloud-based AI algorithm processes videos for DMS and ADAS on the server. The final results are sent back via API callbacks to the Client server.