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AI-TRAFFIC

Bundle of the two applications
AI-ROAD3D and AI-INCIDENT

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AI-TRAFFIC

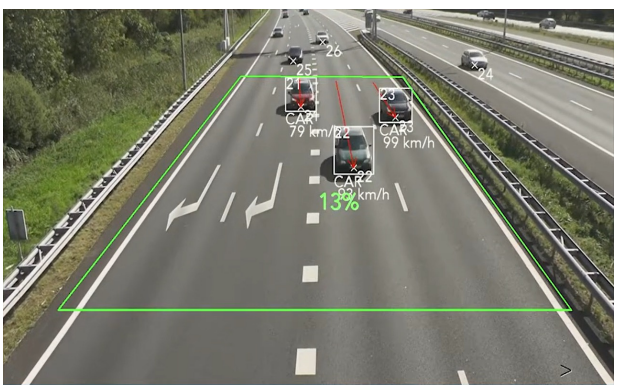
AI-TRAFFIC is a video analytics application based on the most advanced artificial intelligence algorithms, that includes all the functionalities of **AI-ROAD3D** and **AI-INCIDENT**, thus meeting the needs in the smart road field.

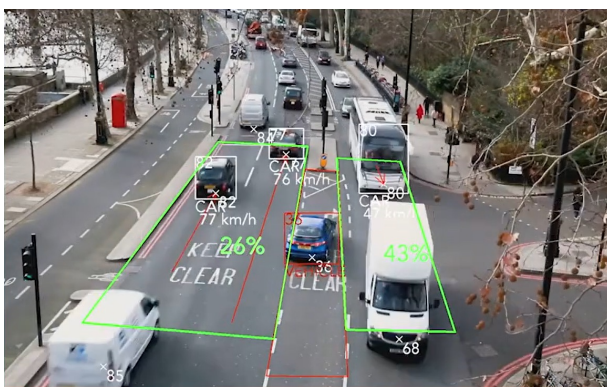
AI-ROAD3D counts and classifies vehicles crossing virtual sensors in a given direction. Three classes of vehicles can be identified: motorbikes, cars and trucks. The analytics is also able to estimate the color and average speed of each vehicle and fires an alarm if this speed exceeds a customizable threshold. It also allows real-time estimation of traffic density as well as the monitoring of traffic flows through origin-destination matrices.

AI-INCIDENT detects anomalous and dangerous situations on the road, such as vehicles driving on the wrong side of the road, stationary vehicles, U-turns, lane changes, queues and pedestrians in forbidden zones.

AI-TRAFFIC combines an advanced 3D calibration and reconstruction mechanism of the scene with the most advanced artificial vision and artificial intelligence algorithms.

Like the **AI-ROAD3D** and **AI-INCIDENT** apps, **AI-TRAFFIC** uses the latest deep learning algorithms for both object detection and classification (distinguishing vehicles and people) achieving a high accuracy even in extremely complex scenarios, such as in tunnels or crowded city streets, at night or in severe weather conditions.





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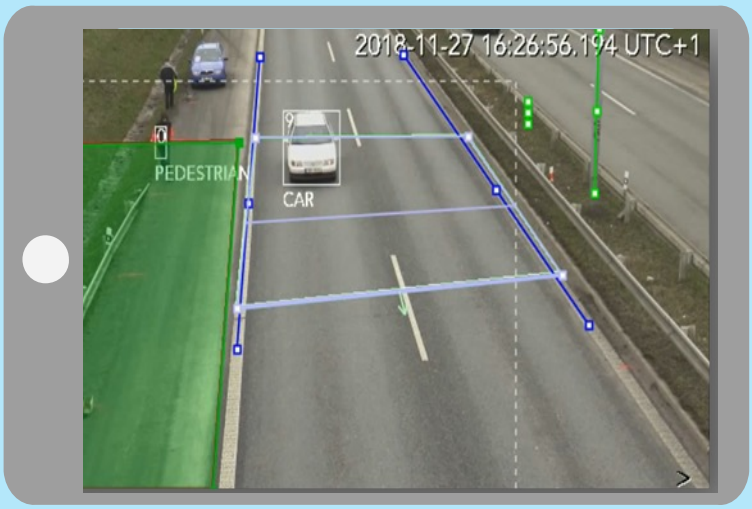
AI-TRAFFIC USE CASE

AI-TRAFFIC includes the functionalities of different apps to meet the needs of any city that would like to be defined as "smart".

The application allows to analyze vehicle flows over different roads of the city, through the vehicle counting or the configuration of origin-destination matrices. Analyzing the average speed of vehicles on the different routes also makes it possible to identify the roads crossed at a higher average speed (or higher than a given threshold), thus suggesting the positioning of patrols or of automatic systems. The solution also identifies potentially dangerous situations on the road, such as a queueing or vehicles running wrong way as well as U-turns.

AI-TRAFFIC can also be used to monitor tunnels or motorways in different whether and lights conditions.

AI-TRAFFIC



ARCHITECTURE
Where can we install the app?

The detailed list of specific compatible platforms can be reached via the link on the right.

Edge | Embedded | Server

INTEGRATION
Where can we notify the events generated by the app?

Events can be sent to external servers using over 20 different mechanisms, which include third-party VMSs, standard protocols (such as HTTP, FTP, MODBUS and MQTT) and also A.I. Tech proprietary protocols, which allow the notification of events to the dashboards of A.I. Tech. More information via the link on the right.

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