AI-ROAD3D

Counting and classification of vehicles, color and speed detection (average and above)
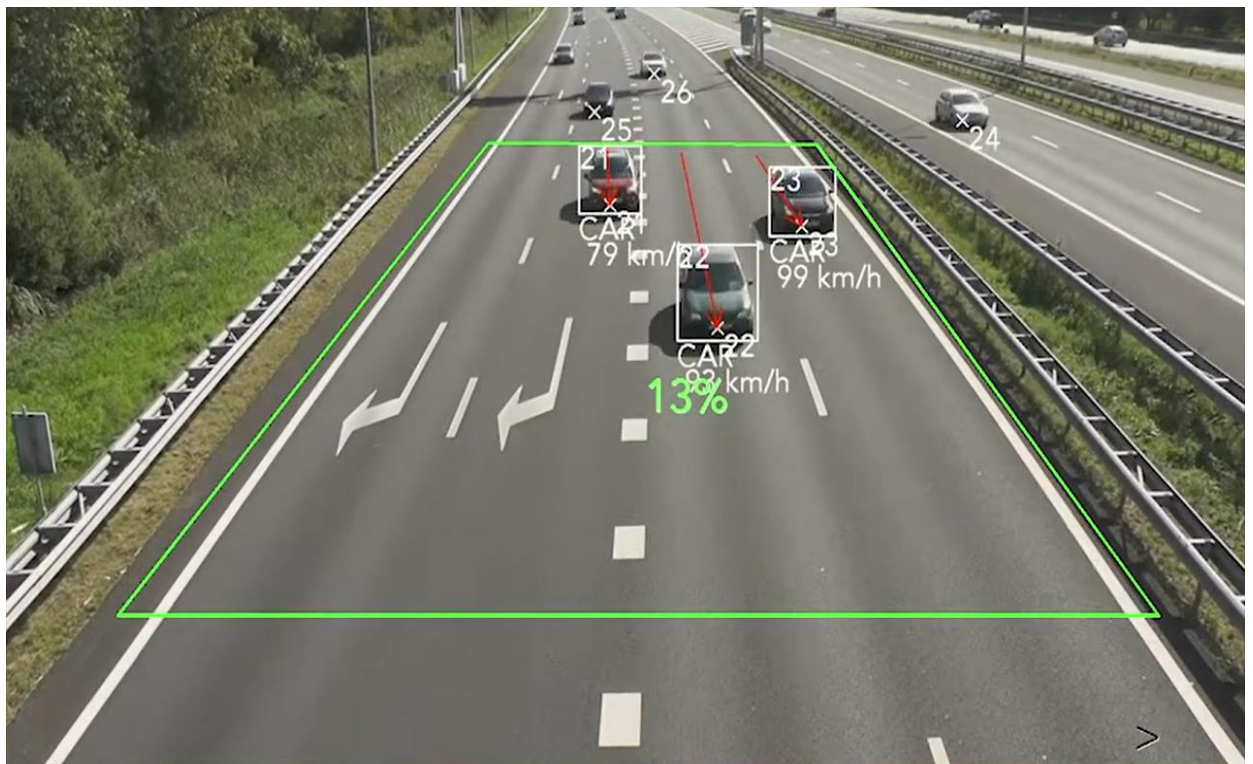
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AI-ROAD3D

AI-ROAD3D is a video analytics application to count and classify vehicles crossing virtual sensors in real-time. It recognized three classes of vehicles: motorbikes, cars and trucks. The application also estimates the color and average speed of each vehicle and fires an alarm if this speed exceeds a customizable threshold. AI-ROAD3D can estimate traffic density as well as monitoring traffic flows through the origin-destination matrix.

AI-ROAD3D combines an advanced 3D calibration and reconstruction mechanism of the scene with the most advanced artificial vision and artificial intelligence algorithms.

The application uses deep neural networks to detect and classify objects achieving a high accuracy even in extremely complex scenarios, such as in tunnels or crowded city streets, at night or in severe weather conditions.
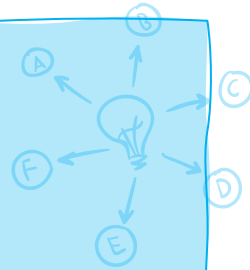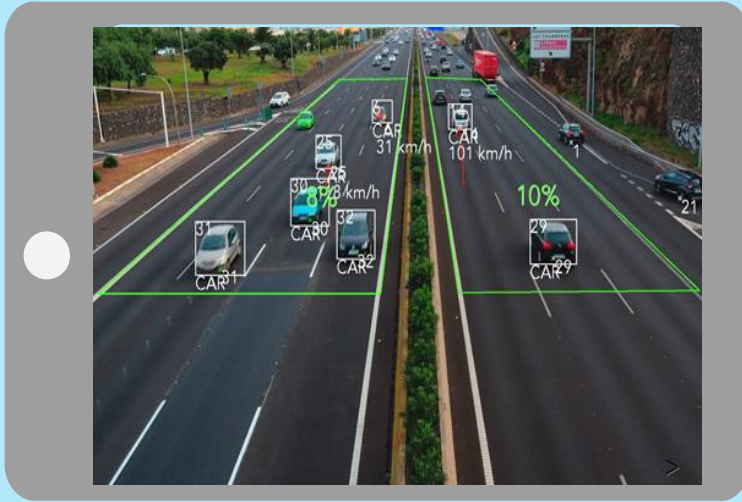
AI-ROAD3D USE CASE

AI-ROAD3D makes it possible to meet the needs of any city that would like to be defined as 'smart'. It provides the possibility of understanding and analyzing vehicle flows in the various city arteries by counting the various categories of vehicles. Analyzing the average speed of vehicles on the various routes allows the identification of roads crossed with a higher average speed (possibly higher than a set threshold), thus suggesting an optimal position for positioning surveillance patrols or automatic systems that can be used for sanctioning purposes.

AI-ROAD3D can also be used to monitor tunnels, motorways, intersections and roundabouts.

Finally, in combination with the *AI-DASH-PRO* dashboard, the app can be used to monitor car parks by counting vehicles at the gates.

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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.