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AI-RAIL

Obstacle detection on the tracks

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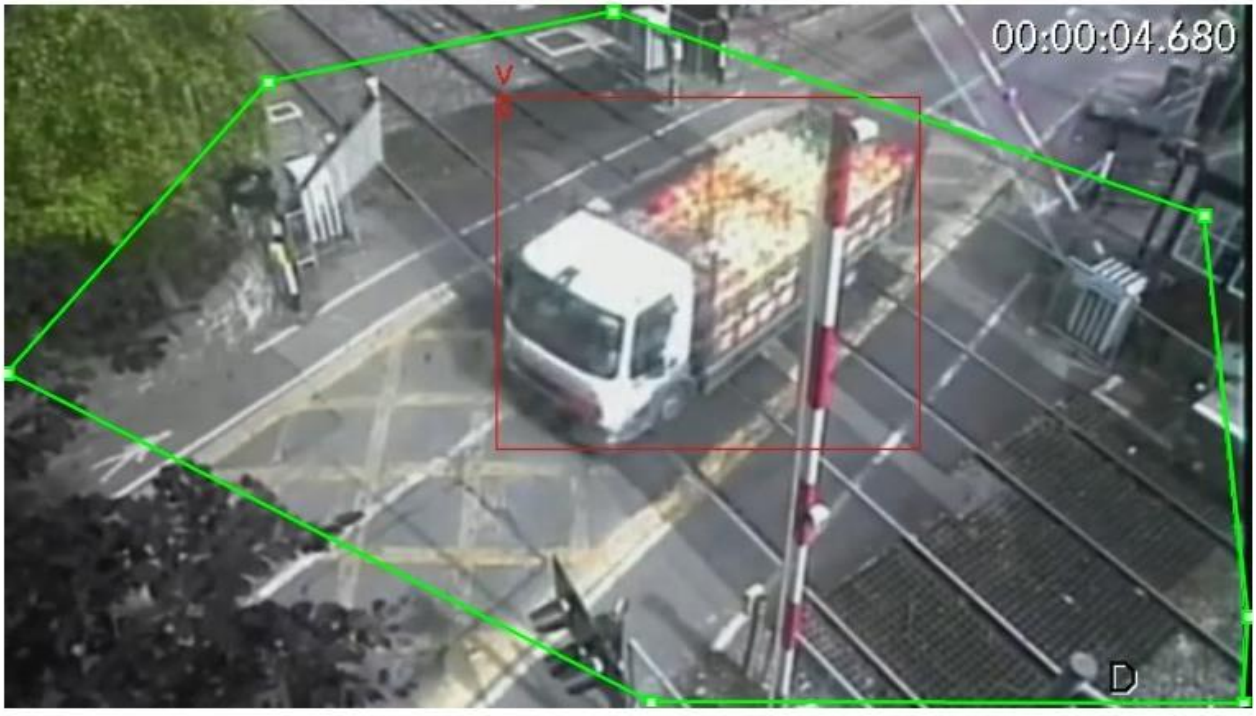
AI-RAIL

AI-RAIL is the video analysis application based on advanced artificial intelligence and deep learning algorithms for the safety of railways through the **detection of obstacles on the tracks**. AI-RAIL is able to distinguish the following categories of obstacles: people, vehicles and boulders.

The application is also able to identify the presence of trains passing on the tracks and deactivate itself dynamically; it is also possible to activate and deactivate the application dynamically via software (API) or via hardware (via I/O device), for example to prevent the app from generating alarms while the **rail crossing** is open, and therefore allows the passage of vehicles without any restrictions.

AI-RAIL can be used both for monitoring rail crossings, in order to verify that they are clear, and near **tunnels** or **rocky ridges**, where the danger of falling rocks is substantial.



AI-RAIL USE CASE

AI-RAIL is the solution for making people and goods in the railway sector safe. There are two main use cases in which this application finds a natural use.
At **rail crossings**, it is necessary to check for obstacles (such as people and vehicles) which obstruct the passage of the train when the barrier is closed. Therefore, it can be expected that the application is activated via external inputs, via software (API) or via hardware (via I/O device), only when the rail crossing is closed and is instead deactivated during its normal use.
Conversely, in the **tunnels**, when exiting them or near **rocky ridges**, the system must be in continuous operation. However, in order to reduce the number of false alarms, the system is expected to be deactivated during the passage of the train, thanks to the possibility of identifying the presence of a train still through artificial intelligence.

AI-RAIL

ARCHITECTURE
Where can I install the app?

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

Edge | Embedded | Server

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

Events can be sent to external servers using over 20 different mechanisms, including third-party VMS, standard protocols (such as HTTP, FTP, MODBUS and MQTT) and A.I.Tech proprietary protocols, which enable event notification to A.I. Tech dashboards.
More information via the link.

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