



# SARAFAN TECHNOLOGY

Machine vision technology for automatic monitoring of compliance with occupational safety regulations

# About the company

Sarafan Technology is a leader in the video recognition market. Since 2015, we have been creating integrated solutions based on computer vision and machine learning technologies to fully automate production processes and reduce the impact of the human factor.

Solutions based on our technology have the best indicators of speed and recognition accuracy of more than a hundred categories of objects.

## We create products for the following industries

- Mining
- Construction
- Energy
- Marine, aviation, mechanical engineering
- Gas and chemicals
- Rail transportation

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# Best performance indicators in video recognition

- Personnel recognition accuracy: **98%**
- PPE recognition accuracy: **99%**
- Distance recognition accuracy: **86%**

## Recognition categories



Personnel



Overalls and footwear



Hand protection



Eye protection



Head and hearing protection



Equipment



# How the system works

## 1 Detection

The system detects the video stream in real time and determines:

- restricted areas;
- actions of personnel;
- the presence of PPE;
- equipment;
- distance of employees to equipment and to restricted areas.

## 2 Personnel identification

Each employee is identified: the search is carried out on a previously uploaded database of personnel photos.

## 3 Violation detection

Violations are detected instantly - for each incident a report is generated, which includes:

- date and time of violation;
- employee identity;
- photo/video of violation.

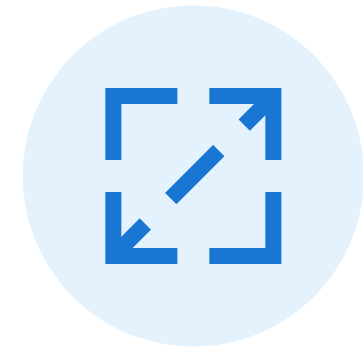
## 4 Notification

When a violation is detected, the system informs employees with an alarm and reports the violation to the controller

# Advantages of the technology



High speed recognition:  
detection in real time



Rapid scalability: training in  
recognition of new object  
categories takes 1 to 2 months



Flexible roll-out: local or cloud  
installation

# Main capabilities

## Rapid integration

Installation and configuration of the system takes from 1 week depending on the number of sites for detection

## Flexible detection configuration

The system is trained according to the occupational safety requirements of your enterprise - during detection, the type of work being performed and the role of the employee are taken into account

## Independence from suppliers

The solution can be used on video from an already installed video surveillance system or equipment provided by **SARAFAN TECHNOLOGY**

# All-inclusive monitoring system

**SARAFAN TECHNOLOGY's** monitoring system can work both with cameras already installed on your sites and with our own equipment. We provide:

- Cameras for video recording
- Sound alarms

We install equipment for you or can provide consulting support on installation to your personnel.



Trusted by





# Success stories

## System of detecting violations of occupational safety requirements for Russian Railways JSC

### Task

Automate monitoring of employee compliance with occupational safety requirements

### Solution

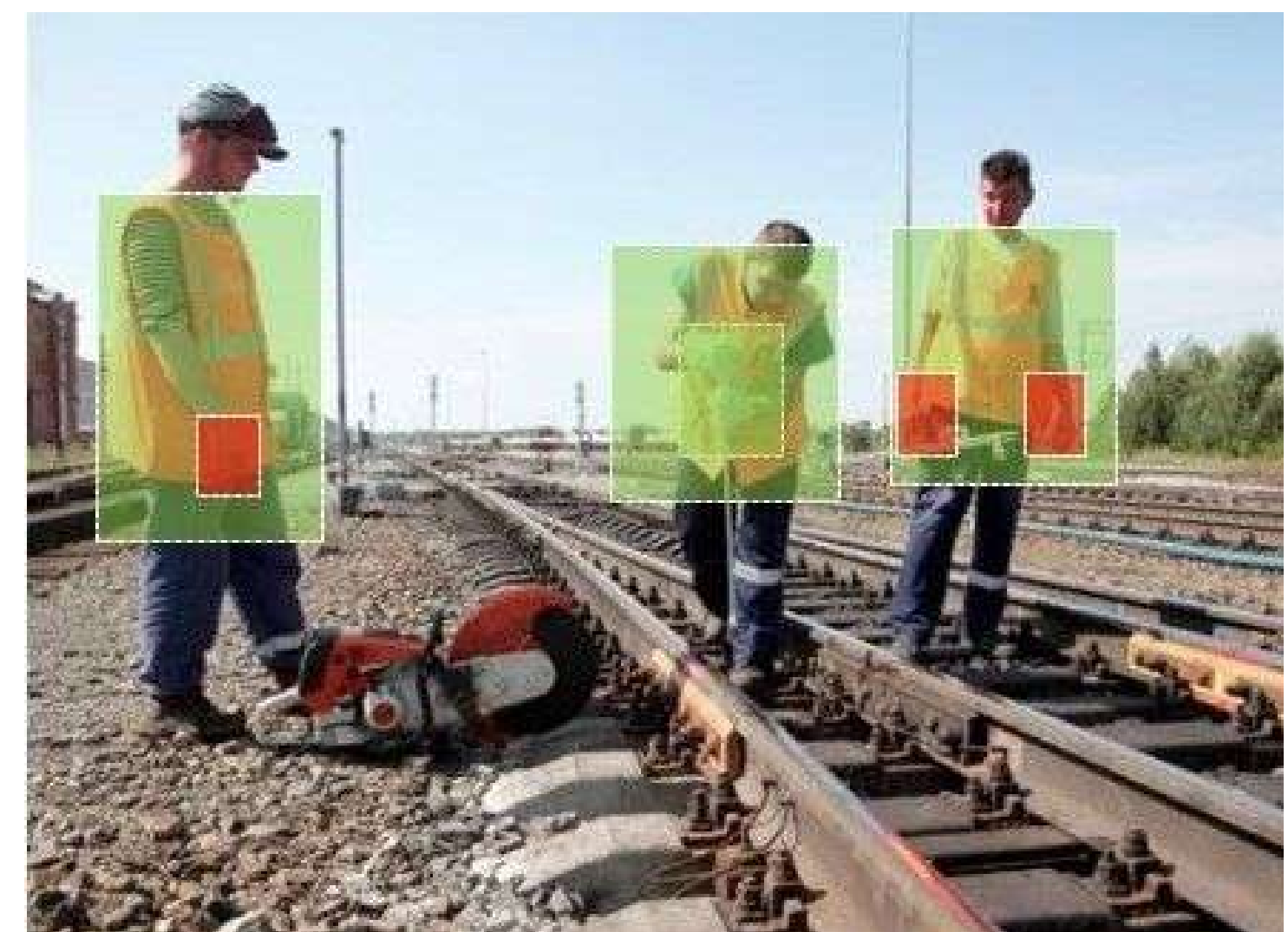
Automatic system for detecting violations of occupational safety requirements with the following functionality:

- identification and video recording of violations;
- notifying the chief and team members about the violation

### Result

100% automation of monitoring

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# SARAFAN TECHNOLOGY

**Artificial Intelligence as a solution to specific problems**

## **Project manager**

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