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pervasive technologies

NVIDIA

Identification of Personal Protective Equipment (PPE) for Workplace Safety

Workplace safety is a major concern for businesses across the globe. Factory floors, testing areas, labs, and other business areas have hazards that require protective equipment to safeguard human health and safety. Manual checks and visual inspection are often employed to verify that workers are using the proper protective equipment. This can be slow, expensive, and error prone. Mistakes can create unsafe working conditions and adversely impact the bottom line.

Pervasive Technologies is a leader in applying artificial intelligence (AI) to image processing. Using automated image recognition, Pervasive's solution can detect if a worker is protected by the right PPE. Automated checks to ensure compliance and safety in the workplace are not only very cost-effective but also help avoid workplace injuries.

Pervasive, in partnership with NVIDIA, uses the latest GPU accelerators to drive analytics and deep learning algorithms. Together, the partnership brings unprecedented levels of automation for PPE audits and enhances worker safety. Capabilities include:

> Audit compliance
> Industrial access control
> Worker's auto checking
> Automated access systems

PPE Detection Solution Stack Components

Pervasive Technologies
> Pervasive's AI Vision solutions work with advanced analytics and deep learning to classify and detects objects of interest

NVIDIA
> NVIDIA Metropolis platform with pre-trained models, transfer learning toolkit, and DeepStream SDK
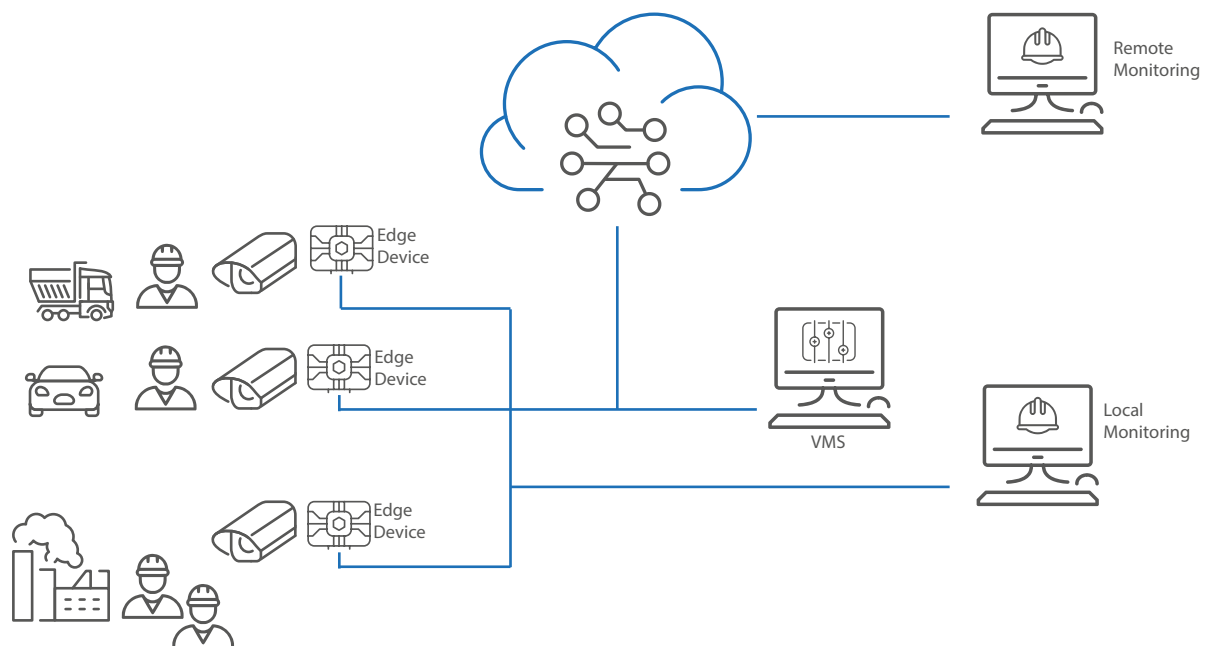> EGX GPU hardware Jetson, Quadro, Tesla®

Arrow Services
> Solutions: Tiers of products designed specifically for analytics applications
> Solution range: Embedded, workstation, and rack mount form factors
> Product services: Design, support, or professional services
> Manufacturing services: Supply chain, integration, and logistics

Improve Operations by Adding Intelligence to Video Streaming and Available Images

Five Years Out

Solution Components

Pervasive PPE — Workplace Safety Solution combines real-time video analysis with advanced algorithms and machine learning to ensure employees are wearing the appropriate personal protective equipment for the work environment. Edge Device is an IoT GPU processing unit that can provide PPE detection information near the camera with any CCTV camera. The solution can push detection output, alarms, and related information to the cloud and to a central processing unit. Camera footage can be processed at the edge or remotely at a central location. Features of the solution include:

PPE Workplace Safety Architecture

Features:

> Integrate with existing IP-enabled cameras, video management software (VMS), and 3rd-party systems
> Set alerts when non-compliance is detected
> Create areas of interest to allow detection in parts of the image
> Install in both indoor and outdoor locations

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Company Profile

Based in Barcelona, Spain, Pervasive Technologies is an innovative company specialised in the construction of predictive solutions through the use of advanced artificial intelligence, machine learning, and deep learning technologies for industrial and retail sectors. The main area of activity is in the application of these technologies for the intelligent treatment of images and video. Pervasive's solutions are consumed as a continuous service in the cloud or edge environment, through API and under subscription.
Learn more

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Five Years Out

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