Smart Vision

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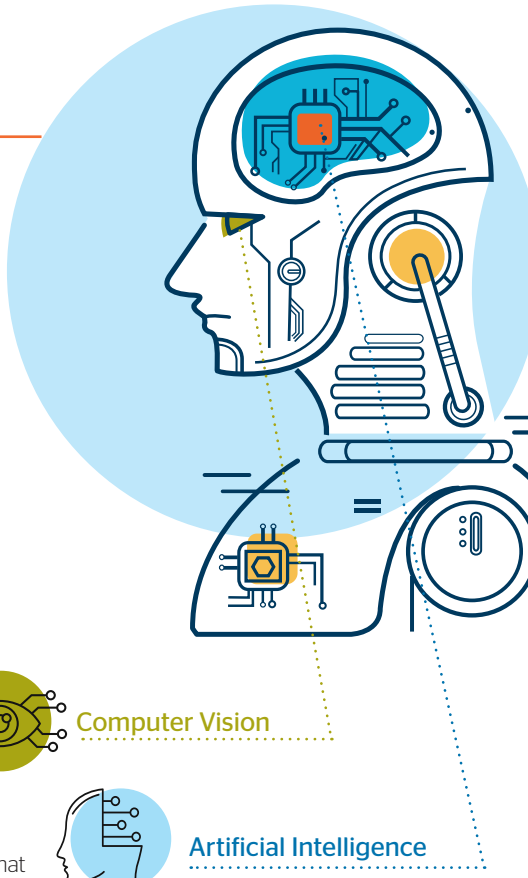
Leveraging the power of Artificial Intelligence and Computer Vision for smart detection capabilities



Smart Vision provides a robust toolbox of modular AI algorithms that can be deployed for real-time analysis on close-to-the-source devices.

Introduction

The revolution of AI and CV is here, bringing enterprises the opportunity to drive improvements in their businesses for several applications ranging from manufacturing and maintenance to marketing and administrative processes.

With an innovative and unique approach, Smart Vision offers a set of interoperable and complementary **Basic Units of Artificial Intelligence (UBIAs for its acronym in Spanish)** which provide advanced capabilities for processing and getting insights from any sensor or video stream that can be used in several situations and scenarios.

Either working independently or cooperatively with other UBIAs, Smart Vision provides **tailored artificial intelligence services according to the specific needs and detection challenges for different use cases**, allowing the establishment of AI-as-a-Service.

Business Challenge

All enterprises and organizations from different industries are experiencing a vast explosion in data generated and gathered, but the key challenge is how to transform those volumes of data into assets and leverage an immense number of new and existing data.

There is an urgent need for non-closed, versatile, dynamic, and flexible solutions based on AI, which allow on-demand consumption and deployment of multiple models and algorithms on existing hardware, low-cost edge devices and legacy systems without disrupting business activities.

Our approach can provide companies from all sectors several benefits thanks to the fast and easy deployment of diverse CV and AI models, addressing specific needs and use cases, on any number and type of devices during the time needed. The flexibility provided by Smart Vision makes it possible to detect and gain insights from a specific scenario today and a completely different one tomorrow.

What Smart Vision offers you?

Smart Vision provides modular, interoperable and compossible UBIAs with various CV and AI models and algorithms to identify and extract valuable insights on use cases that go from the most basic detection (i.e. people) to the most complex situations (i.e. tracking people with suspicious behaviour through multiple surveillance cameras located in a stadium).

Its versatility makes possible to create tailored detection services with on-demand deployment of UBIAs on any type of devices including Edge for real-time processing and alarm generation (i.e. deployment in drones for inspection purposes and detection of incidents on gas pipelines, energy power lines, railways, roads, etc).

The benefits are multiple: optimisation of operational processes, cost reduction, easy deployment, transparent installation, easy change, improve efficiency of operators/employees, reduction of the rate of false positive, alarm generation and automatic detection of non-desired patterns, gain knowledge about assets and customers, among others.

Use it, reuse it, compose it!

You want it? Deploy it
Capsules are ready-work pills that can be deployed and executed in minutes. You can choose the solutions to deploy on determinate devices using cloud base service and advanced communication network protocols. Installation of the devices is transparent to the final user.

You need another? Change it
You can execute more than one capsule per device (e.g. up to eight parallel algorithms in a Nvidia Nano). If you want to change the solutions, just choose another and deploy it.

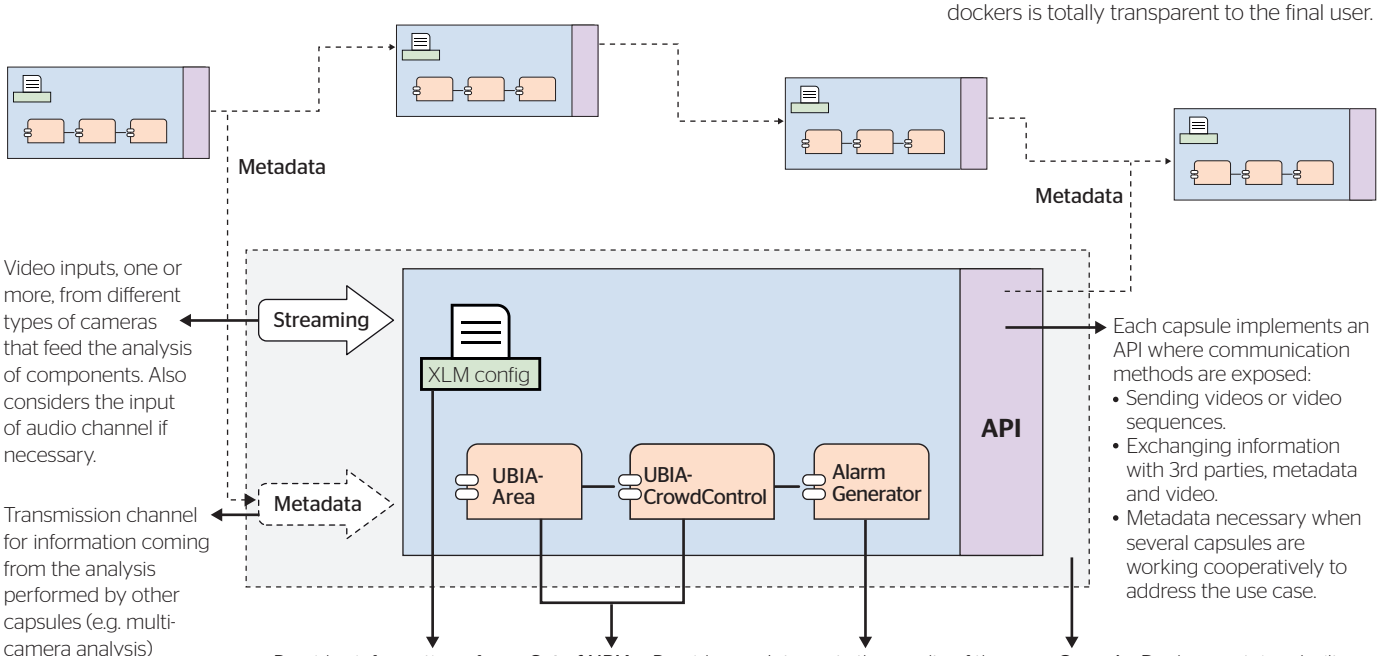
Is something new? Let´s compose it
Our UBIAs cover many typical use cases and scenarios demanded by the industry, but if your request is unique, we can create new solutions by recombining existing UBIAs or creating new ones.

Description of the solution

Smart Vision is based on an innovative and flexible approach with a wide range of on-demand UBIAs which can credibly interpret the data coming from any sensor or video stream and provide the system with cognitive capacity through AI models and application of CV techniques with common families of algorithms.

The UBIAs can either work independently for the detection of a specific need (e.g. posture of a human body on a specific area), or can be connected with other independent ones (e.g. behaviour) to build advanced capabilities for more complex needs (e.g. detection of suspicious/illicit actions across multiple cameras).

The deployment of necessary components is done through docker container capsules containing the UBIAs, a series of components and general communication and configuration services. In general, each use case can require the execution of one or more capsules depending on the detection challenges and the hardware support where they are deployed. Deployment of the dockers is totally transparent to the final user.



Smart Vision offers UBIAs with different capabilities for tailored detection services to address specific needs of sectors such as Utilities, Retail, Manufacturing, Oil & Gas, Transport, Security, Border Control, Finance, Insurance, Construction, Agriculture, among others.

At the same time, Smart Vision provides security for Deep Learning systems against different attack techniques trying to deceive the algorithms and representing a real threat to services based on AI and CV.

Why Atos

As a pioneer in data-driven digital transformation, Atos helps organizations unlock the value of their data and turn it into business outcomes. We notably provide a portfolio for data-driven business transformation in every market, with deep domain knowledge and expertise to design, build, run and secure smart business services and data platforms.

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