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MIaaS

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Management System
ISO 22301:2019
ISO/IEC 27001:2022

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MIaaS Advance Intelligence Surveillance as a Service

MAISaaS

5 Pillars of MAISaaS
Use Cases

OVERVIEW

In the realm of Physical Security, preventing losses from theft and fraud, ensuring employee safety, and enhancing customer experience are paramount. MAISaaS offers a Video Surveillance as a Service (VSaaS) solution that leverages video analytics to address these challenges effectively.

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1. Use Case: Retail Sector

Enhancing Security and Customer Experience with MIaaS Advance Intelligence Surveillance as Service. (MAISaaS)

SL No.	Challenges	Video Analytics use cases	Outcomes
Shrinkage			
1	Strain on Retailer's bottom line due to Shrinkage (shop lifting, employee theft)	Video Surveillance 24 hours a day.	Asset protection and shrinkage reduction.
2	Hedge against fraud at Point of Sale at the check-out counter.	POS Supervision – Video feed superimposed with customer transaction	Improved conflict resolution. Reduction of Fraudulent activity
Customer Experience & Marketing			
3	Lack of insights on Customer experience and consumers changing behavior.	• Visitor Counter • Visitor's Activity heatmap	• Improved sales conversion rate. • Validate Retail experience.
4	Lack of Insights on customer demographics	Facial Recognition and Age and Gender Guesstimation	• Improved customer experience. • Grow sales revenue
Employees safety & Well-being			
5	Staff wellbeing is at risk in an unsupervised retail store.	Behavior analytics –worker down detection, assault or armed personnel with hands up detection	Improved employee safety & NPS
6	Lack of insights on front-line staff's workload affecting Retail Productivity.	Queue length detection at the checkout area	Optimized Staff working schedules. Boosts retail operational efficiency.

Use Case: Retail Sector
Solutions & Benefits

1. Shrinkage and Asset Protection

- Challenge: Retailers face losses due to shoplifting and employee theft, impacting their bottom line.
- Solution: 24/7 video surveillance integrated with video analytics can detect suspicious activities, such as unusual behaviors at point-of-sale (POS) terminals. By superimposing transaction data on video feeds, retailers can quickly identify and investigate discrepancies.
- Outcome: Significant reduction in shrinkage and fraudulent activities, leading to better asset protection.

2. Customer Experience & Marketing Insights:

- Challenge: Lack of insights into customer behavior and demographics can hinder effective marketing strategies.
- Solution: Visitor counters and heatmaps provide data on customer movement and preferences. Facial recognition and age/gender estimation offer demographic insights.
- Outcome: Enhanced understanding of customer behavior, leading to improved sales conversion rates and targeted marketing campaigns.

3. Employee Safety & Well-being:

- Challenge: Ensuring employee safety in an unsupervised environment is challenging.
- Solution: Behavior analytics can detect incidents like worker falls, assaults, or the presence of armed personnel. The system can automatically alert authorities or management, ensuring quick response times.
- Outcome: Improved employee safety, boosting morale and job satisfaction

4. Operational Efficiency:

- Challenge: Inefficient management of front-line staff workload can affect overall productivity.
- Solution: Queue length detection at checkout areas helps manage staff schedules more effectively, ensuring adequate staffing during peak times.
- Outcome: Streamlined operations and optimized staff utilization, enhancing customer satisfaction.

2. Use Case: Financial Services & Banks

SL No.	Challenges	Video Analytics use cases	Outcomes
Security			
1	Ensure comprehensive security of Central Offices, Branches and ATMs	Video Surveillance 24 hours a day.	Enhanced Physical security without worrying about system maintenance and operations.
2	Threats from robbers and cyber attackers of physical vandalism at ATMs to rob cash or gain access to ATM network for cyber attacks.	• Behavior Analytics - ATM Crime detection, Man Down Detection, suspicious person spending more time. • Abandoned object detection	• Secure Capital assets and critical physical infrastructures
3	Securing the critical assets of Banks	Intrusion detection after working hours	Enhanced security for Critical infrastructure with reduced man-power.
Safety			
4	Customers safety at risk at ATMs while withdrawing money.	Man down/ Crouching detection, Crowd gathering detection (People count)	Gain real-time insights on physical vandalism, attack on ATM user and take immediate action to mitigate the physical threats.
Customer Experience			
5	Lack of insights on customer experience on an unmonitored ATMs.	Queue length detection outside ATM	Data gathered Enhances customer experience.
6	Customer experience in the bank branch or financial institution.	Queue length detection in the customer service area/Cash counter, Visitor count in banks, Heatmap	Gain real-time and historical insights on customer experience.

Use Case: Financial Services & Banks
Solutions & Benefits

1. Enhanced Physical Security:

- Challenge: Banks and financial institutions need to protect critical infrastructures like branches, ATMs, and central offices from threats like physical vandalism, robberies, and cyber-attacks.
- Solution: 24/7 video surveillance coupled with advanced video analytics for ATM crime detection, suspicious person detection, and intrusion detection. Abandoned object detection further ensures that suspicious items are identified and addressed promptly.
- Outcome: Comprehensive security coverage without excessive reliance on manual monitoring, resulting in reduced costs and improved security.

2. Customer Safety:

- Challenge: Customers are at risk of attacks or theft while using ATMs.
- Solution: Video analytics can detect unusual behaviors, such as man-down incidents or crowd gathering, allowing for quick response to potential threats.
- Outcome: Enhanced customer safety and peace of mind, which strengthens customer trust in the institution.

3. Improved Customer Experience:

- Challenge: Long wait times and inadequate customer service can affect customer satisfaction.
- Solution: Queue length detection at ATMs and service counters, visitor counting, and heatmaps provide valuable insights into customer flow and waiting times.
- Outcome: Optimized staffing and service levels, leading to a better customer experience.

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3. Use Case: Logistics – Security & Security

SL No.	Challenges	Video Analytics use cases	Outcomes
Security			
1	Low margin industry needs to be ahead in managing warehouse and logistic facility. Critical infrastructure security is one of them.	• Video Surveillance 24 hours a day combined with video analytics. • Intrusion detection, Abandoned object detection, people detection	Enhanced Physical security with significant manpower savings.
Safety			
2	Wearhouse requires added safety to staffs due to the mobile nature of work.	Behavior analytics – Personal protective equipment violation detection (helmet, safety west, special boots) by staffs, threat detection such as raised hand detection, fall/slip detection.	Enhanced safety and automated safety compliance.
3	Hedge against unforeseen incidents of fire.	Fire and smoke detection.	Enhanced safety of facilities where traditional method of detection is not efficient.
Operational Improvement			
4	Customers expect better delivery speed and efficiency.	Number plate recognition, Container ID detection, Vehicle count, Vehicle type	Automated authorization of transport vehicles and containers.

Use Case: Logistics – Security & Security
Solutions & Benefits

1. Security of Logistics Facilities

- Challenge: Warehouses and logistics centers face security challenges, including unauthorized access and theft.
- Solution: 24/7 video surveillance, intrusion detection, and people detection systems. Advanced analytics can detect abandoned objects, unauthorized access, and vehicle identification using number plate recognition.
- Outcome: Increased security and reduced theft, ensuring the safety of goods and assets

2. Safety Compliance

- Challenge: Ensuring employee safety in a dynamic and potentially hazardous environment.
- Solution: Behavior analytics for detecting personal protective equipment violations (e.g., missing helmets or safety vests), fall detection, and threat detection.
- Outcome: Improved safety standards and compliance, leading to fewer workplace accidents and injuries

3. Operational Efficiency

- Challenge: Inefficient management of incoming and outgoing goods.
- Solution: Automated vehicle and container identification, including container ID detection and vehicle counting, to streamline operations.
- Outcome: Faster and more efficient handling of goods, leading to better delivery speed and customer satisfaction

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4. Use Case: Manufacturing

SL No.	Challenges	Video Analytics use cases	Outcomes
Security			
1	Security of Critical Infrastructure is prominent in Manufacturing plant, as any unauthorized access to the facility threatens the production output and thus poses the risk of supply chain disruption.	• Video Surveillance 24 hours a day combined with video analytics. • Linking access events with video footage. • Authorized access to vehicles via Automatic number plate recognition (ANPR) • Intrusion Detection, Abandoned object detection	Enhanced Physical security with significant manpower savings.
Safety			
2	Worker safety is at most important factor at manufacturing facility. Manual supervision is difficult at large facility to enforce safety compliance.	• Detection of Person not wearing helmet, not holding handrail, not wearing safety west, person entering hazardous zone • Worker fall, slip, down detection due to unsafe working condition or electrical shock.	Enhanced worker safety with automated alerts leading to shorter lead time in emergency response.
3	Unreliable system to detect fire in outdoor open space or large production plants.	• AI fire and smoke detection.	Enhanced safety from fire hazards
4	Labor intensive supply chain management for incoming raw materials and outgoing finished goods. Majority of theft or malpractice occurs at loading bay area or extraction site.	• Container or railcar ID tracking via AI ANPR • Barrel or object counting for inventory management	Video Analytics enables efficient supply chain management with reduced manpower. Digitization creates visibility and Theft proof process.

Use Case: Manufacturing
Solutions & Benefits

1. Security of Manufacturing Facilities

- Challenge: Manufacturing plants are vulnerable to unauthorized access, which can disrupt production and pose security risks.
- Solution: 24/7 surveillance with video analytics for monitoring access points, ANPR for vehicle access control, and intrusion detection.
- Outcome: Secure facilities with reduced manpower requirements, ensuring uninterrupted production.

2. Worker Safety

- Challenge: Large manufacturing facilities face challenges in enforcing safety compliance and preventing accidents.
- Solution: Video analytics for detecting safety violations, such as workers not wearing protective gear, and real-time alerts for incidents like falls or electrical shocks.
- Outcome: Enhanced worker safety and quicker response times to emergencies

3. Supply Chain Management

- Challenge: Managing the flow of raw materials and finished goods efficiently.
- Solution: AI-powered video analytics for container and railcar ID tracking, barrel counting, and inventory management.
- Outcome: Improved visibility & security in the supply chain, reducing theft, ensuring smooth operations.

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5. Use Case: Food & Beverage

SL No.	Challenges	Video Analytics use cases	Outcomes
Brand + Security			
1	Restaurant chain businesses must manage negative incidents like vandalism and employee theft at the restaurant.	Video Surveillance 24 hours a day combined with video analytics ensures vandals are caught on camera and the security footage can be used to streamline incident investigation and resolution.	• Evidence based incident resolution and law enforcement reduces negative incidents. • Reduces employee theft.
2	Negative impact on restaurant's brand value with the deteriorated food safety and quality in the kitchen. Sustainable sanitation in the kitchen is difficult in unsupervised condition.	• Video Surveillance 24 hours a day • Detection of spills, untidiness in the kitchen area • Detection of sanatory non-compliance such as chef not wearing hat or food handling gloves.	• Monitor food quality and safety during meal preparation. • Streamline and optimize employee training.
Customer experience			
3	Consistently ensuring pleasant Customer dining experience, at the same time managing employee satisfaction.	Use video footage to collect data on employee workload, gain insights from heatmap, and monitor the customer journey.	Enhanced customer experience and improved employee retention.
4	Increase revenue by adopting to post pandemic trends like curb side pickup.	Utilize camera and Video analytics to automatically detect arrival of vehicle for food pick up at pick up lots.	Efficient operation of Curbside pickup.

Use Case: Food & Beverage
Solutions & Benefits

1. Food Safety and Quality

- Challenge: Ensuring high standards of hygiene and safety in kitchen areas.
- Solution: Video surveillance for 24/7 monitoring of kitchen activities, including detection of sanitary violations (e.g., chefs not wearing hats or gloves) and unsanitary conditions (e.g., spills or clutter).
- Outcome: Maintenance of high food safety standards, protecting brand reputation and customer health.

2. Customer Experience

- Challenge: Delivering a consistent and pleasant dining experience.
- Solution: Use video analytics to monitor customer interactions, gather data on employee workload, and analyze heatmaps of customer movement.
- Outcome: Enhanced understanding of customer preferences and better employee management, leading to improved customer satisfaction.

3. Operational Efficiency

- Challenge: Managing curbside pickup and in-restaurant operations efficiently.
- Solution: Camera and video analytics to automatically detect the arrival of vehicles for curbside pickup, optimizing the process.
- Outcome: Faster service, increased revenue, and adaptation to post-pandemic dining trends.

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