

THE RETAILER'S GUIDE TO INTELLIGENT VIDEO SURVEILLANCE FOR AI-DRIVEN ENGAGEMENT, OPERATIONS, & SECURITY



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CAPITALIZING ON VIDEO SURVEILLANCE SYSTEMS

Retailers must continually adapt to stay competitive, satisfy customers, and increase their bottom line. Many fundamental retail objectives are evergreen and fundamental: improve customer service, understand customer demographics, optimize store layout, and reduce inventory losses. Increasingly, retailers are fulfilling some of those objectives by implementing technology solutions; like many industries, retail is undergoing a digital transformation. The most agile retail stores are applying best- in-class technologies that complement, rather than replace, their existing resources so they can achieve a better ROI from their current systems.

Because most retail stores already use video surveillance (CCTV) cameras, that is one area where they can consider ways to capitalize on that existing investment. In recent years, many retailers have done that by implementing video content analytics software to fully leverage the data that lies in the footage captured by their video cameras.

Continue reading to learn about video intelligence software and how retailers are using it to transform their everyday retail operations for all aspects of the business, including marketing, purchasing, and security.



OVERVIEW: WHAT IS VIDEO CONTENT ANALYTICS SOFTWARE?

Video content analytics software is powered by Artificial Intelligence (AI) to process video to identify and classify objects in the video footage, such as people, vehicles, and other items, and then index them. This enables operators to quickly and easily search live and recorded video, filter and alert on content based on identifying criteria, such

as gender, size, color, speed, path, direction, and dwell duration. Intelligent video surveillance makes video not only searchable and actionable, but quantifiable. By aggregating video data over time, video content analytics provides business intelligence that critically helps management understand trends, make decisions, and develop strategies.

OPTIMIZED & PERSONALIZED CUSTOMER EXPERIENCES

Long queues at checkout lines or traffic jams in parking lots can create customer frustration and dissatisfaction, yet it is often difficult for store managers to be aware of lines, crowds, or traffic jams in every area of a store. Video analysis helps management teams stay on

top of such situations by detecting when predefined object and people-counting

thresholds are met and alerting operators to these and other pre-determined behaviors in real-time. These rule-based alerts can

be triggered whenever the customized criteria are detected. For example, proximity identification and count-based alerts can be used in the checkout area to notify retailers when queues are forming, by detecting the number of people and their proximity to one another. Managers can then make quick and informed decisions to quell the queues, such as deploying additional counter clerks,

redirecting customers to other checkout areas or making long-term renovation plans to prevent future issues.





Video analytics platforms that support face recognition can also empower retailers when it comes to tracking visitor and employee traffic. With face re-identification, systems can recognize individuals as anonymous, unique visitor identities, and analyze aggregate and unique guest traffic. This functionality enables users to differentiate between recognized employees and anonymous guests, as well as pull reports and draw conclusions based on visitor counts that exclude staff, so retailers can measure unique visit duration and site navigation and quantify repeat and bounced visitor traffic.

Beyond face re-identification and navigation metrics, facial recognition can be used – with visitor consent – to further personalize customer experiences, to ultimately improve brand loyalty and increase sales. Alerts based on face recognition can be configured to notify operators when customers in the brand loyalty program enter the store, enabling the staff to proactively engage with that guest and automate follow up engagement.

INTELLIGENT MARKETING & MERCHANDISING DECISION MAKING

Video content analysis helps retail marketing and merchandising managers gain insights about who their customers are, which aisles and products draw their attention, and what percentage of shoppers that enter the store convert into paying customers. This is quantitative, actionable data to inform advertising, merchandising and layout strategies that will ultimately create more positive customer experiences and increase shopping conversions.

DATA-DRIVEN STORE LAYOUT AND PRODUCT PLACEMENT

When it comes to designing store layout, it's extremely important to understand visitor traffic patterns and problem hotspots within a store. Dashboard visualizations answer questions such as, how do visitors typically navigate the store? Which displays and advertisements attract the most attention? During which hours is there increased traffic at the checkout? How do revenues and sales statistics compare to visitor traffic patterns?

Such data points help retailers make intelligent decisions about placing products or displays. By detecting the number of shoppers that visit a product display or heat-mapping where shoppers tend to walk and how long they typically dwell at a display, in an aisle, or at a checkout counter. Data trend reports empower purchasing and marketing staff with product popularity insights and help store designers see common paths and traffic bottlenecks.





Similarly, aggregated video data can be analyzed to understand and visualize qualitative and quantitative demographic insights about shoppers, such as the total number of shoppers on a weekly, daily or hourly basis, and the number of men vs. women, or adults vs. children. That information can help the store managers and marketing team assess their audience, and tailor their purchasing, marketing and displays according to their targeted audience.

CENTRALIZED ANALYTICS FOR UNDERSTANDING TRENDS AND BEHAVIORS

While visitor patterns and metrics are invaluable to individual stores, their value is compounded for large scale retailers with multiple branches of varying sizes. Flexible intelligent video surveillance architectures enable retail chains – from pharmacy and grocery to fashion sectors – to aggregate demographic, footfall and navigation, unique traffic and other key performance indicators across stores to identify visitor preference and employee engagement patterns, develop regional or localized strategies, and more. Alone or combined with other data reporting tools, such as POS or inventory analysis, this business intelligence can become a critical driver of revenue growth, brand loyalty and continued strategic decision-making.

CHAPTER 4 DRIVING SAFETY, SECURITY, & EFFICIENCY

Typically, when retailers implement video surveillance it is primarily for physical security, including monitoring staff and property to prevent and investigate shoplifting, internal theft, accidents, slips/trips/falls, and other incidents. Video analytics capabilities extend the return on investment for video security, by empowering security and operations teams to respond to and investigate incidents quickly and comprehensively.

INCREASING SITUATIONAL AWARENESS FOR REAL-TIME RESPONSE

When it comes to preventing security events, situational awareness is critical. Security staff must be aware of and respond quickly to risk indicators such as crowding, inactivity, dwelling or loitering, or sudden or anomalous environmental changes. By enabling users to configure rule-based alerts for behaviors and objects of interest, intelligent video surveillance drives operator attentiveness and readiness to respond when time is of the essence.

For example, operators can set up custom dwell alerts that are triggered if someone is dwelling for an unusual length of time in one area; lingering can potentially signify an intent to commit a crime or a medical incident such as someone slipping, tripping and falling in an aisle. Alert triggers can be based on object classification, as well as facial and license plate recognition technology, which alerts when a known and





recognized person or vehicle is detected on-site. Much like the VIP watchlist mentioned above, store management can create shoplifter suspect watchlists to heighten situational awareness and monitoring when specific individuals – that match suspects on a watchlist – enter the store

ACCELERATED FORENSIC INVESTIGATION

When criminal or emergency incidents cannot be prevented, it falls to security to investigate events and, as needed, provide evidence to support law enforcement. The extensive search and filter functionalities of a video content analytics system allow investigators to efficiently, rapidly and accurately review high volumes of footage from multiple cameras, instead of timeconsuming and imprecise manual evidence review. Intelligent video surveillance empowers investigators to pinpoint relevant video segments based on known information and witness accounts, such as what the suspect was wearing or the license plate of his/her getaway car. Comprehensive object extraction, identification and recognition enable video analytics operators to filter video based on specific search criteria and combinations of classes and attributes to accelerate forensic investigation and video search, whether it's looking for a missing child in a shopping center, reviewing a slip/fall incident, or investigating a case of internal or external inventory theft.

REDUCED CROWDING & OCCUPANCY CONTROL

A major factor influencing the customer experience and facility safety is building occupancy and crowd control. Retailers must be able to prevent overcrowding, not only for the sake of customer satisfaction and safety, but also often to comply with safety regulations. Video content analytics can accurately assess and report building occupancy, by detecting and analyzing people counts, proximity between people and line-crossing, among other object and behavior classifications. These metrics can be used to configure rule-based alerts, to trigger calls to action to retail staff to evaluate crowding and queuing and respond in real-time, and the data can also be aggregated and visualized to demonstrate store occupancy trends over time and make long term, strategic decisions for preparing for expected and expected crowding.

OPTIMIZED MAINTENANCE & CLEANING

People counting alerts can also assist retailers in meeting health and cleanliness standards. Retail stores that are clean are more attractive to customers, but normally, maintenance schedules are time-based, which means that heavily trafficked and rarely visited spaces are cleaned and kept up at the same frequency, despite their usage. Video content analysis can track visitor traffic in real-time, and be configured to notify teams that maintenance or cleaning is required after a certain number of customers has been detected in a space, such as a restroom or changing area. Over time foot traffic data can be evaluated by generating visualized dashboard reports and heatmaps that illustrate area usage and drive intelligent decision making around cleaning scheduling and staffing.



TRANSFORMING VIDEO INTO ACTIONABLE INTELLIGENCE

Retailers constantly seek ways to improve customer service, marketing, merchandising, and security. By investing in video intelligence software, they can get more value out of their video surveillance systems. They benefit by being able to gather significant business intelligence from their video footage, that would otherwise go untapped. With real-time information and long-term data from video content analysis, retailers are empowered to respond more quickly, make better decisions, and develop more effective strategies that drive customer satisfaction and store revenues.





ABOUT BRIEFCAM®

BriefCam® is the leading provider of video analytics software that enables people, companies, and communities to unlock the value of video surveillance content. Delivering accurate, flexible, and comprehensive solutions, BriefCam's video analytics platform provides valuable insights for accelerating investigations, increasing situational awareness, and enhancing operational intelligence.

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