



BRIEFCAM HEALTHCARE BUSINESS CASES

THE KEY TO EXCEPTIONAL PATIENT CARE

BriefCam

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In recent years, due to monumental advancements in artificial intelligence, video analytics technology has progressed to meet the diverse needs of the healthcare industry. While some hospitals and healthcare facilities have been eager to adopt AI-powered video analytics, others are still unsure how this technology works or how to specifically use it to address their challenges. In BriefCam's Healthcare Business Cases, we will dig into specific healthcare use-cases and how to address them with BriefCam.

BriefCam offers a comprehensive video analytics platform driven by three critical solutions:

REVIEW: Accelerates investigations by empowering users to review hours of video in minutes based on an ever-expanding set of object classes and attribute filters, patented **VIDEO SYNOPSIS®** technology, as well as Visual Layers visualized overlays to refine video searches and pinpoint critical intelligence.

RESPOND: Enables users to trigger real-time alerts based on complex object classification and recognition filter combinations. RESPOND increases situational awareness, empowering operators to react to events as they unfold.

RESEARCH: Drives quantitative analysis of video data through an integrated Business and Operational Intelligence solution. With RESEARCH, hospitals can visualize object movement, hotspots, object interactions, and more through interactive and intuitive dashboards.

Now that we have established a baseline understanding of the BriefCam Video Analytics Platform, let's take a closer look at 6 healthcare-specific use-cases and how BriefCam users are empowered to address them:

*Note: For reference, there is a summary table at the end of this document defining each of the platform capabilities.



USE CASE 1 REDUCING PATIENT ELOPEMENT

WHEN A PATIENT COMPROMISES THEIR SAFETY BY ENTERING OR EXITING A PREDEFINED AREA OR WARD.

Feature	How To Use It
Custom ClassifID	Patients who need to be closely monitored due to health conditions can be assigned specific-colored gowns. The hospital can train the system to recognize these “uniforms” as a custom class, empowering easier search and alerting across facility cameras
Line Crossing	Set up an alert to trigger when patients, visitors, or unauthorized staff have crossed into sensitive areas. These can also be configured at exit points from the hospital or even from a specific ward.
Face Recognition	Create a watchlist of at-risk patients and leverage appearance similarity or facial recognition capabilities to empower tracking in emergency scenarios in areas where HIPAA is not violated. <small>*The BriefCam Video Analytics Platform can be installed without Facial Recognition based on privacy regulations for your facility.</small>

Better Together:

Creating a real-time alert with Line Crossing, Custom ClassifID, and Face Recognition is an option for tracking and alerting on high-risk patients within a hospital or healthcare facility. By adding a patient’s face to a watchlist or placing at-risk patients in specific gowns (“uniforms”), system operators can proactively prepare to track movement throughout the hospital when the need arises. When combined with Line Crossing, users can be alerted in real-time when specific patients cross ward boundaries or pass through doors and exits that they shouldn’t. Using all 3 as a unified and proactive security solution provides more accurate alerting, reduces false alarms, and increases comprehensive safety for staff and patients alike.



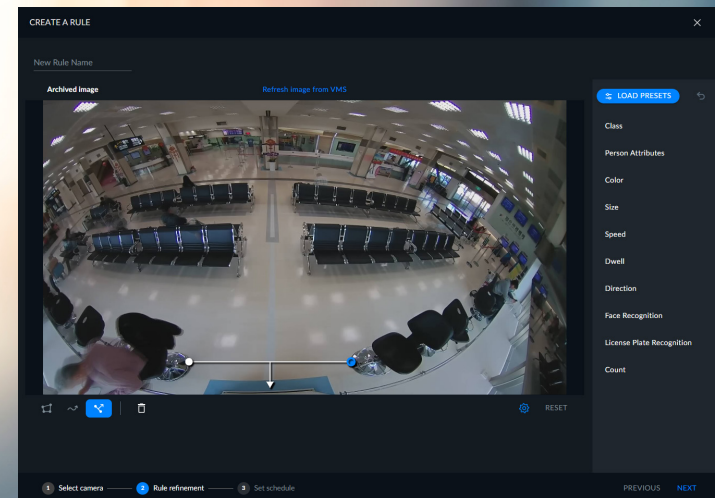
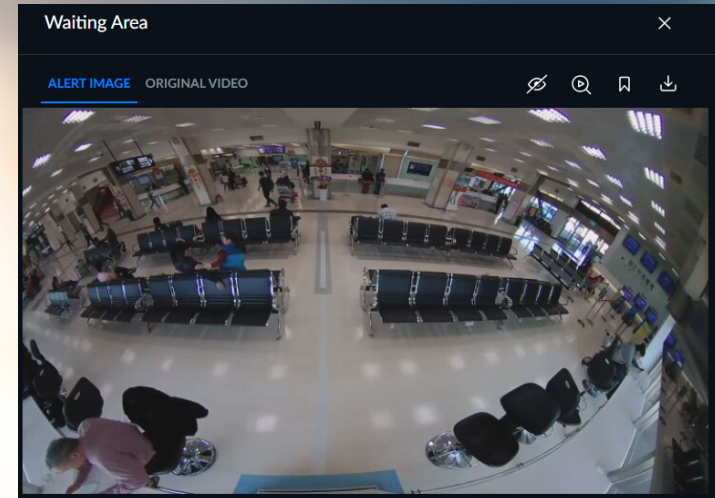
USE CASE 2 THREATENING VISITOR SAFETY

WHEN PATIENTS, FAMILY MEMBERS, OR SIGNIFICANT OTHERS RETURN TO A HOSPITAL AFTER BEING REMOVED BY SECURITY FOR THREATENING OR PERPETRATING A VIOLENT INCIDENT.

Feature	How To Use It
License Plate Recognition (LPR)	Maintain a license plate watch list with the numbers of known offenders in order to detect vehicles returning to the hospital grounds after an offense has been reported.
Face Recognition	Tag video footage of known offenders and create watchlists to detect possible matches and track activity throughout the hospital or upon entrance to the hospital grounds.

Better Together:

Creating real-time alerts and maintaining watchlists of past offenders can trigger notifications that empower hospital security to closely assess a situation, confirm the individual or vehicle matches records for past offenders, and prevent potentially dangerous visitors from threatening public safety on the campus or at the hospital. LPR can also be used for gate access control into garages and parking lots, preventing specific vehicles from entering the premises.



USE CASE 3 DRUG DIVERSION

WHEN DRUGS ARE ILLEGALLY DISTRIBUTED OR ARE USED FOR PURPOSES NOT INTENDED BY THE PRESCRIBER.

Feature	How To Use It
Area	Mark areas in medication storage rooms to visualize interactions with medication cabinets or shelves and delineate sensitive spaces.
Line Crossing	Set up alerts when staff or patients enter pharmacies or medical supply rooms.
Face Recognition	Upload photos of approved staff members that are allowed in pharmacies, so users can be alerted when there is unauthorized access to a pharmacy.

Better Together:

Creating a real-time alert with Line Crossing, Area, and Face Recognition is an option for monitoring areas where drug diversion could occur. Using Area and Line Crossing, users can be alerted when a person, staff member, or patient interacts with a medical cabinet or enters a medical storage room or pharmacy. With Face Recognition, approved medical professionals can be added to a watchlist and excluded from the alerting, so false alarms are not triggered when approved personnel are interacting in these areas. If drug diversion persists, the REVIEW and VIDEO SYNOPSIS solutions can be leveraged to detect face matches for potential drug diverting suspects.



USE CASE 4 INFANT ABDUCTION

WHEN A NONCUSTODIAL PARENT OR STRANGER
ABDUCTS AN INFANT.

Feature	How To Use It
Custom ClassifID	If medical staff in the infant ward wear the same-colored scrubs (“uniform”), then a custom class can be created for their scrub color, giving users the ability to filter, search, and alert on this custom class.
Face Recognition	Upload photos of approved staff members that are allowed in nurseries or NICUs, so users can be alerted when there is unauthorized access to these areas.
Line Crossing	Set up alerts when staff, patients, or visitors cross into nurseries or NICUs.

Better Together:

Creating pre-defined rules with Line Crossing, Custom ClassifID, and Face Recognition provides healthcare security operators with real-time alerts when non-approved personnel or visitors enter a nursery or NICU. With Face Recognition, approved medical professionals can be added to a watchlist and excluded from the alerting, so false alarms are not triggered.



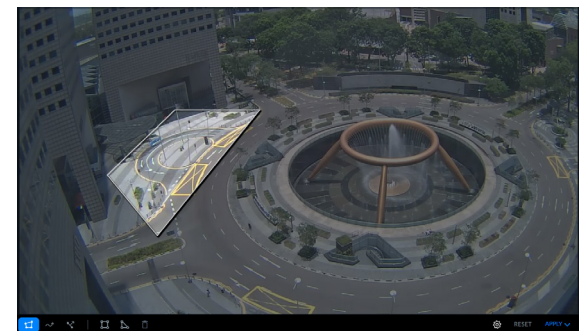
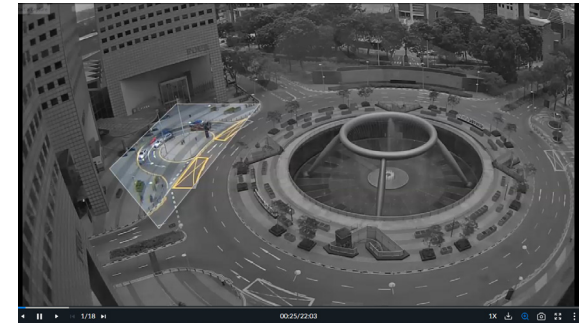
USE CASE 5 PARKING LOT AND GARAGE SAFETY

WHEN PARKING LOTS AND GARAGES ARE PRIME TARGETS FOR CRIMINAL ACTIVITY RANGING FROM CAR THEFT AND BREAK-INS TO ASSAULT AND EVEN MURDER.

Feature	How To Use It
VIDEO SYNOPSIS	After an incident, use VIDEO SYNOPSIS to watch hours of video in minutes by simultaneously displaying events that have occurred at different times and linking back to the original video to improve incident understanding and drive investigations.
Face Recognition	Following an investigation, if a criminal remains at large, upload their photo or surveillance video screen capture to a watchlist. If the suspect match returns to the area, security and law enforcement can be alerted. Additionally, facial recognition and appearance similarity can be used to track suspects across cameras to gather critical details for the investigation.
License Plate Recognition	If the criminal entered or exited the location in a vehicle, LPR can be used to search and alert on the vehicle associated with the criminal.
Fast Track	Leverage geo-location, time and object similarities to track objects across cameras, reducing investigation time.

Better Together:

If a crime is not caught in real-time, tracking down the criminal can be challenging and time consuming. To bring relevant objects to attention during an investigation, operators can pair VIDEO SYNOPSIS technology with the extensive REVIEW search filtering capabilities, to view all events on the same scene and further filter based on features, such as gender, clothing, or appearance similarity. Facial and license plate recognition are additional alerting capabilities for notifying security and law enforcement agencies when a criminal or vehicle appears in the camera view. For efficient cross-camera tracking of individuals throughout a campus or facility, FAST TRACK uses geo-location, as well as time and object similarities, to track objects of interest across multiple cameras to identify where they fled the scene.



USE CASE 6 HOSPITAL BUSINESS INTELLIGENCE

WHEN UNDERSTANDING TREND DATA ENABLES
BETTER OVERSIGHT AND PLANNING.

Feature	How To Use It
Visual Layers	Dwell time and common paths can be aggregated over time to deliver visualized data and reports for optimizing traffic flows and preventing bottlenecks and overcrowding.
People Counting	Leverage people-counting analysis over time to help forecast how many people to expect in a waiting room or emergency room during certain weeks or months, based on historical data.
Class	Classes can be used to separate people and vehicles in analysis. By doing so, users can gain insights into how many vehicles are coming into the hospital, parking in the garages, or even illegally parking in unauthorized areas, such as ambulance bays.

Better Together:

RESEARCH can be used to visualize data and build reports based on the data collected from existing video surveillance infrastructure. Classes can be used to differentiate between people and vehicle data in the RESEARCH module, enabling the analysis of trends for both data sets. With Visual Layers users can visualize traffic bottlenecks throughout the hospital campus. Whether that is analyzing vehicles parking where they shouldn't or the most common pedestrian paths throughout the facility. Furthermore, with people counting capabilities, RESEARCH can breakdown the number of men, women, and children entering the facility and aggregate these numbers over time and drive forecasting for peak weeks or months based on historical data. With all the different data points that can be analyzed with RESEARCH, hospitals can gain a comprehensive understanding of their campuses and make smarter decisions to optimize safety and operations for patients, visitors, and staff.



TABLE OF PLATFORM FEATURES:

CROSS-PLATFORM VIDEO ANALYTIC CAPABILITIES			
Feature	REVIEW Search	RESPOND Alert	RESEARCH Quantify
COLOR Based on any combination of object color, including Brown, Red, Orange, Yellow, Green, Lime, Cyan, Blue, Purple, Pink, White, Grey, and Black	✓	✓	✓
TIME RANGE Based on specific time ranges	✓	✓	✓
CLASS Based on People (Man, Woman, Child), Two-Wheeled Vehicles (Bicycles, Motorcycles), Other Vehicles (Car, Pickup, Van, Truck, Bus, Train, Airplane, Boat), Illumination Changes, and Animals.	✓	✓	✓
CUSTOM CLASSIFID Define, train on-site, and leverage custom classes for uniformed workers and 4-wheel vehicles. Available only with Linux-based engine.	✓	✓	✓
PERSONAL ATTRIBUTES Based on person characteristics, including Lower and Upper Wear (by color), Hats, Face Masks, and Bags.	✓	✓	✓
DWELL Based on object dwelling for pre-set time periods within a scene	✓	✓	✓
VIDEO SYNOPSIS Simultaneously view objects that have appeared at different times in a video, or from smart- alerts for accelerated video review	✓	✓	
FAST TRACK Quickly find objects across surrounding cameras based on geolocations defined in the integrated VMS. Available for Genetec and Milestone.	✓		
APPEARANCE SIMILARITY Identify people and vehicles with similar attributes	✓		
FACE RECOGNITION Based on images extracted from existing video or photo uploads, conduct “in the wild” face matching for persons included or excluded on watchlists	✓	✓	✓
LICENSE PLATE RECOGNITION For in “in the wild” surveillance scenarios, recognize license plates based on watchlists for vehicle behavior analysis and traffic optimization	✓	✓	✓
LINE CROSSING Detect demarcation crossings in a predefined direction	✓	✓	✓
VISUAL LAYERS Create visual analytics and derive insights about activity, dwell time, common paths, and background changes	✓	✓	✓
PATH Identify objects traveling along one or more user-defined paths	✓	✓	✓
AREA Identify objects included or excluded within one or more user-defined 3- or 4-sided polygon areas	✓	✓	✓
PEOPLE COUNTING Count the number of people in a pre-defined area or who travelled in a certain direction, track queues and crowd formations, and measure occupancy to optimize space utilization and pedestrian traffic flows	✓	✓	✓

CONCLUSION

We trust hospitals to provide us with the highest standards of safety and security when we are most vulnerable, and hospitals need comprehensive support across their complex ecosystem to make sure our trust is not misplaced. Video surveillance and analytics enable hospitals to provide exceptional patient care by creating a comprehensively safe and secure environment equipped to monitor high-risk areas, respond to emergencies in real-time, deter drug diversion, and more. Video analytics is the tool healthcare facilities need to make exceptional patient care a reality.



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.

VIDEO SYNOPSIS® technology is a registered trademark of BriefCam, Ltd. For more information about BriefCam's video content analytics solutions, visit <https://www.briefcam.com/>.