

Technology Response to

COVID-19

Version CF 1.2

Overview

Prevention

Symptoms

Facial Recognition

Object Detection

Edge Analytics

OVERVIEW

A storm was coming, and not many of us were very much aware of what was about to come and hit the world with. **Covid-19 arrived!**

Covid-19 arrived!



It strangled and stranded all of us in our homes, with a huge impact at multiple levels, from economic, to human and psychological.

It was declared a pandemic on **March 11** by the World Health Organization.

To combat Covid-19, tech companies like Digifort took a hard look at the new reality and worked hard to build enhanced tools to help make the situation safer and smarter.

SYMPTOMS

Symptoms may include



FEVER



COUGH



RESPIRATORY PROBLEMS



SHORTNESS OF BREATH



Per the CDC: "...symptoms of 2019-nCoV may appear in a few as 2 days or as long as 14 after exposure."

PREVENTION

A few tips to prevent infection



Wash your hands with soap and water



Avoid touching your face



Stay home if you're sick



Clean and disinfect surfaces



Cover your mouth and nose with a mask if you are coughing/sneezing

FACIAL RECOGNITION

CAN IT RECOGNIZE with a surgical mask on?



Face recognition when wearing a mask has become an issue for our doctors and nurses.

A robust occlusion detection which allows to detect if a person is wearing a face mask - or not.

People Counting & Queue Management

SAFR face detection can be used to perform extremely accurate people counting.

In the social distancing era, it is extremely important to understand the amount of people in a certain space.

Digifort can contribute to that by both counting people, finding subjects and triggering alerts accordingly.

SAFR provides queue length wait times and passage flow in a live or historic views.

TRAFFIC DASHBOARD (PEOPLE COUNT)

Age Group	Percentage
18-29	40%
30-39	40%
40-49	20%
50-59	20%
60+	0%

Sentiment	Percentage
😊	37%
😐	40%
😞	23%

- Total number of faces detected
- Percentage of male and female face
- Hourly face traffic
- Age grouping
- Sentiment

If a face has been registered, it will be counted as one even if it appears several times.

QUEUE DASHBOARD

Metric	Value
Main-Queue Current Wait time	24 Minutes
Line length	10
Last 10 Hours: Passage count	69
Last 10 Hours: Max wait time	0 Minutes
Last 10 Hours: Min wait time	51 Minutes
Last 10 Hours: Avg wait time	1.7 Hours

- Last wait time
- Minimum/Average/Maximum wait time
- Max wait time of the count interval
- Max line length of the count interval
- Max passage count of the count interval



An Airport Operation

Use this dashboard in combination with two cameras (one positioned at queue entry and other at exit).

Gain Insights about Traffic Trends

Wait times and line lengths through various stations :

- Immigration
- Baggage drop-off
- Security screening
- Boarding
- Taxi pick-up

Location Tracking & Contact Tracing Individuals

Contact Tracing:

Determine the contact and proximity history of individual employees.

Solution:

To achieve this we can find out the employees in events with sort time duration between two different persons.

Tracking Aged (Potential Risk Group for Covid-19 Infection)

Monitoring the age of people at a certain place - understanding higher volumes of potential risk groups - or via watchlists the declared ones enrolled at a hospital or medical center and monitoring them in the city.

OBJECT DETECTION



Artificial intelligence is based on artificial neural networks, which are algorithms that try to mimic the behaviour of the human brain. Compared to video analysis software on the market today, IPXAnalytics can reduce the amount of “false positive” alarms considerably. Today the platform can detect over 80 objects such as: person, boat, car, motorcycle, truck, plane, cell-phone, notebook, television, suspect, weapon, long gun, motorcycle helmet, (person) with a helmet or without safety helmet - PPE, etc.



Intelligent monitoring of :

- People and animals
- Vehicles
- Motorcycles and objects.



Detection of people with :

- Particular characteristics
- Specific color of garment or specific objects, such as PPE.



Solutions for maintaining standards & regulations like wearing a face mask and keeping the social distance during COVID-19 Pandemic.



Crowd Detection analytic estimates the number of people within a given area in real time and triggers an alarm in Digifort if the threshold is exceeded.



According to the World Health Organization, falls are the second leading cause of accidental or unintentional injury deaths worldwide.

Digifort's effective fall detection detects a fall and send an alarm to the appropriate authorities.

The distinct advantage of video surveillance technology for fall detection:

- First responders can visually confirm alarms remotely and instantly.
- A single person can effectively monitor hundreds or even thousands of individuals, dispatching first responders to assist only when a fall is confirmed.

SUPPORT OF ANALYTICS TEMPERATURE RULES

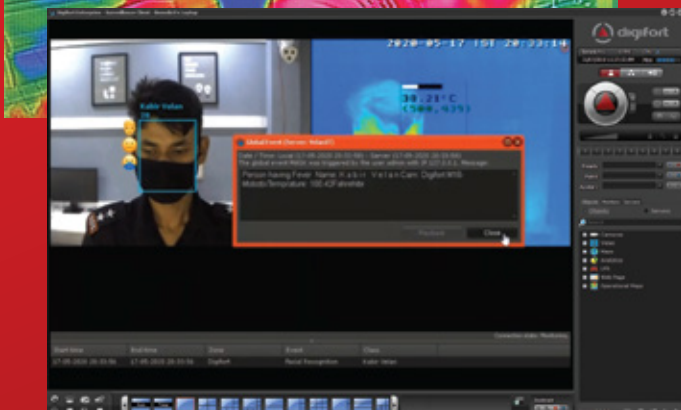


Integration with thermal cameras

Digifort's Edge Analytics allows the use of temperature rules (Thermal Cameras) to trigger fast action event in Digifort.

One of the main symptoms of COVID-19 is high fever. For this reason, many businesses are now considering thermal camera technology to try and detect people showing signs of fever.

Through our native integration with these cameras, they can work within the central platform, Digifort Surveillance Client, and extend its capabilities much further.



DIGIFORT OCCUPANCY MANAGEMENT SOLUTION



Responding to coronavirus pandemic with Modern Technology.



Object Analytics can also detect face masks (Raise an alert if a person is not wearing a protective mask).

Retailers are limiting the number of shoppers to promote social distancing.

Our new Occupancy Management solution will enable you to operate within the guidelines for occupancy density. With crossing line, you can trigger an alarm when some object is crossing the line and keep counting of the events.

Occupancy Analytics

Analysis of data related to number of occupants in a certain location in order to derive information and insights on how to improve shoppers safety and business performance.

COVID-19

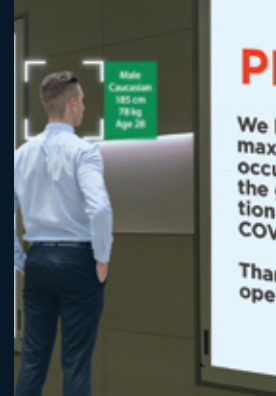
FLOW CHART



Counts the number of people in the scene



If the number exceeds the set number, will trigger an alert.



Information Display

This solution can count the number of people in your store.



Deep Learning

The solution employs computer vision technology and includes an algorithm which calculates current store occupancy.

3 Methods of counting

- Using SAFR to count using face detection at the entry.
- Using VCA to create a counting line (In and Out) at the entry.
- Using zones and count the number of people within the zone.

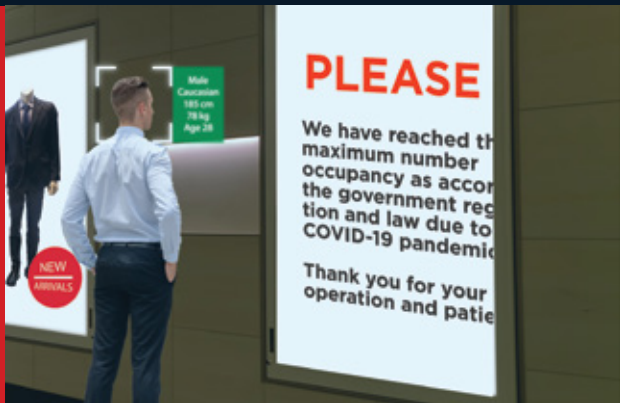
Send alerts to employees when occupancy limits are being reached.



Global alert in Digifort

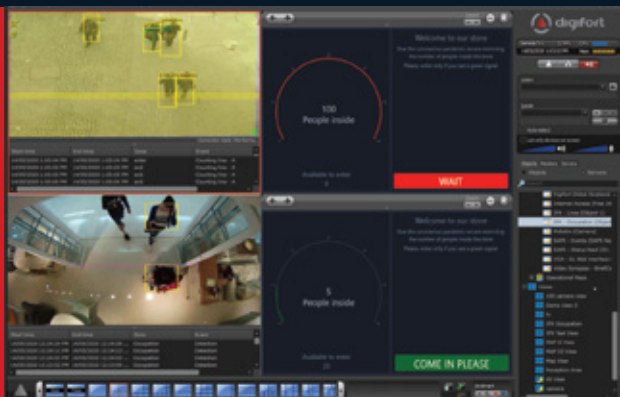
Digifort's advance alerting technology can be configured to be customized to your needs.

- Alert by email with snap shots and link to playback.
- Create a bookmark.
- Play a pre-recorded message.
- Sound an alarm.
- Activate I/O relays.
- Send a HTTP request to another system.



Information Display

Help manage occupancy by reacting to threshold alerts. Alerts can be delivered by global events, to phones via emails or to a third party web-service and trigger a message display on a monitor.



Algorithm which calculates current store occupancy and displays this in real-time along with messaging advising customers when it is safe to enter.

Full historic searching and reporting are available.

Reports can also be produced to demonstrate your compliance with local measures.

The 'New Normal' in the COVID-19 era.

Change sometimes happens so quickly that it is almost impossible to keep up. But no-one could have predicted just how quickly the impact of the Covid-19 pandemic would change the way we live. Everything from the way we work to the way we shop has been turned on its head.

All of us must be prepared for this new normal.

Here at Digifort, we are doing our bit.

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