

An aerial, black and white photograph of the New York City skyline, featuring numerous skyscrapers and the Hudson River. The Chrysler Building is prominent on the left. The image serves as the background for the entire graphic.

IRONYUN

ANALYTICS FOR A SAFER WORLD

1 JUNE 2020



A New World

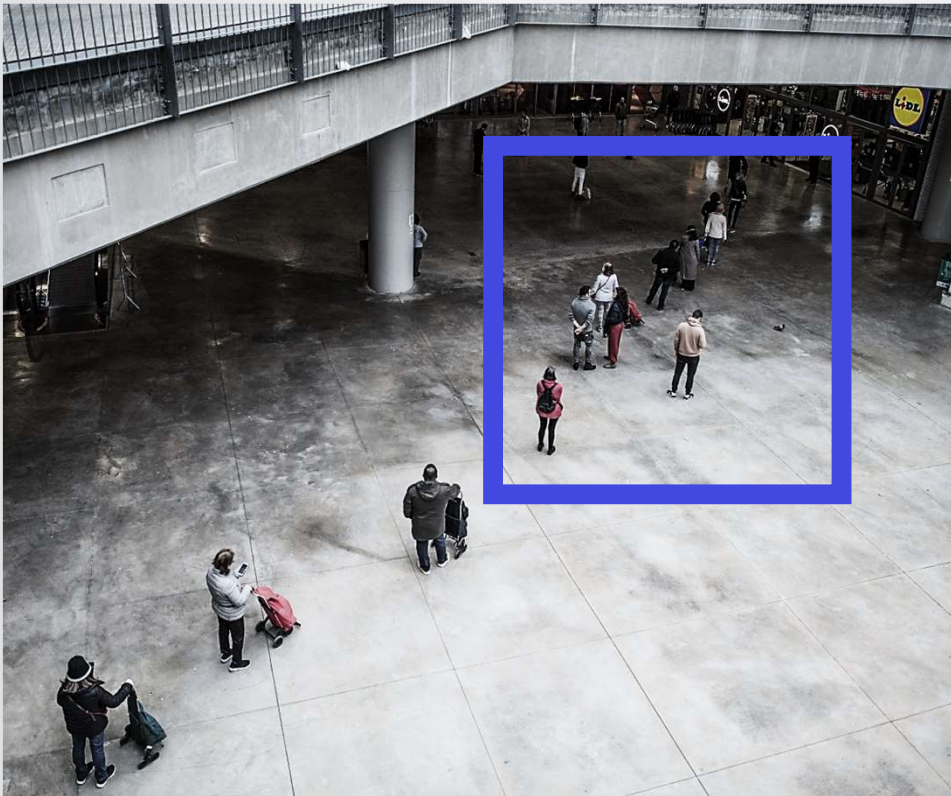




SOCIAL HEALTH ANALYTICS

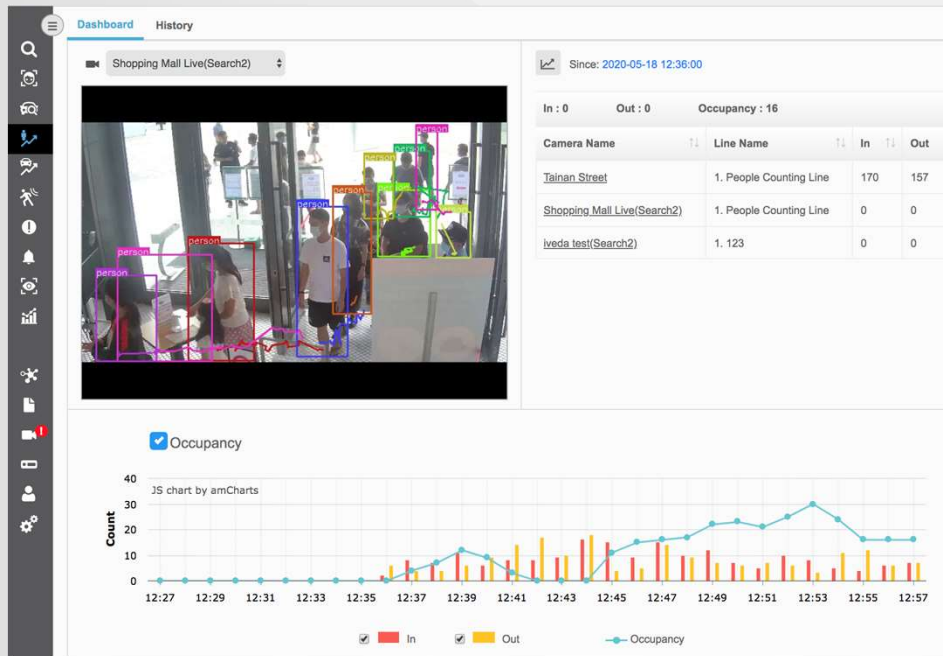
- ❑ Distancing Detection
- ❑ Occupancy Detection
- ❑ Facemask Detection
- ❑ Temperature Detection

DISTANCING DETECTION



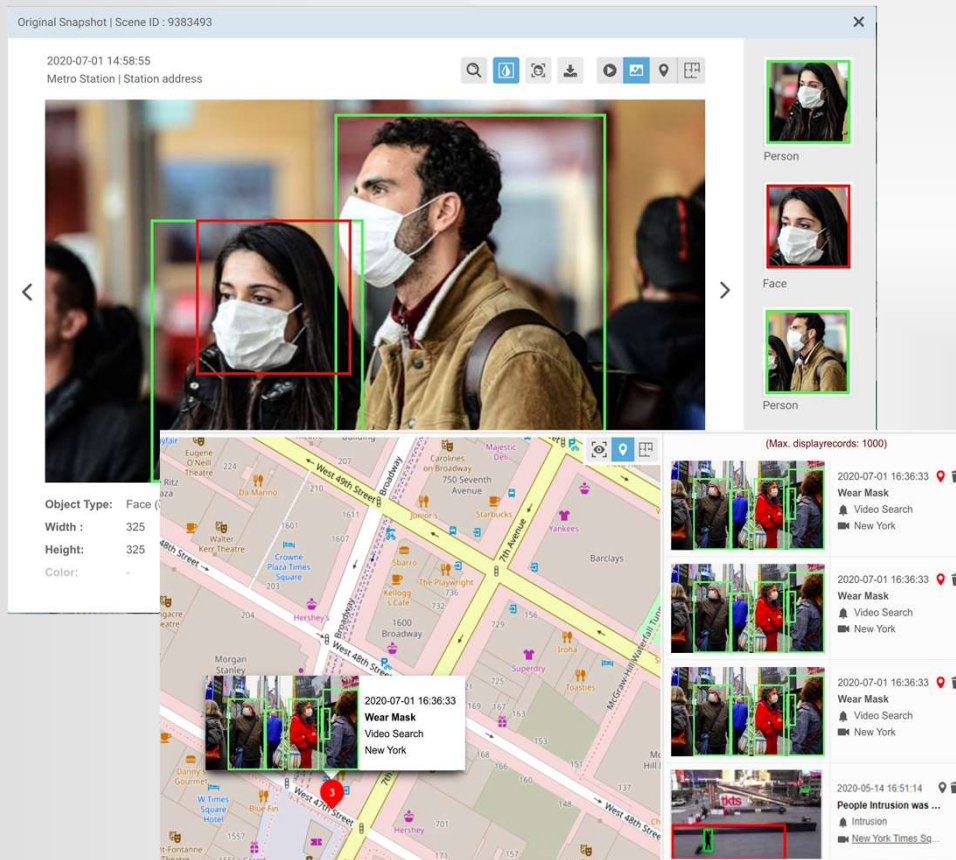
- ❑ Detect 2 or more people within 6ft of each other in lines
- ❑ Real-time alerts
- ❑ No false alerts
- ❑ Inside, outside, day, night, low-light
- ❑ <https://youtu.be/JXp3KbvZIIM>

OCCUPANCY DETECTION



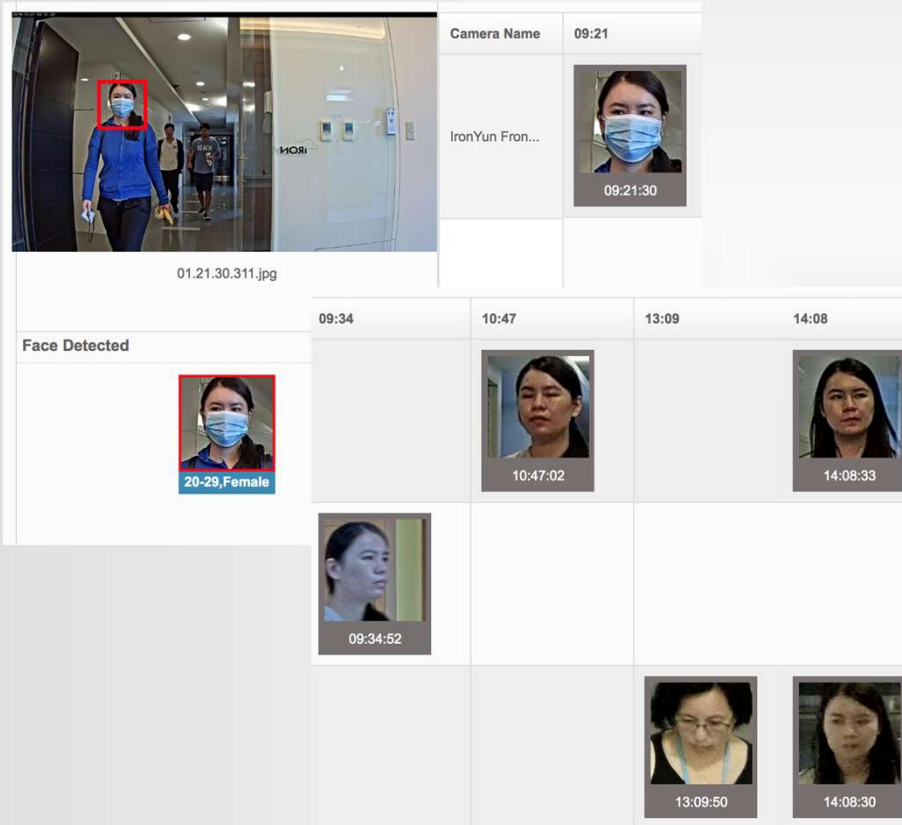
- ❑ Measure occupancy of an enclosed and defined space in real time
- ❑ Restaurant, store, gym, exercise room...
- ❑ Alert when occupancy exceeds user defined threshold
- ❑ Count across multiple entrances and exits to manage occupancy across rooms, floors, facilities

FACEMASK DETECTION



- ❑ Detect with / without facemask
- ❑ Real-time alerts
- ❑ Location tracking
- ❑ <https://youtu.be/OxwK7bdkUiA>

FACEMASK AND FACIAL RECOGNITION



- ❑ Recognize faces with or without facemasks
- ❑ Match masked and unmasked images of the same person
- ❑ Match to approved list for automated access control
- ❑ Show paths and locations based on camera location and timestamps
- ❑ Requires no database, protecting privacy

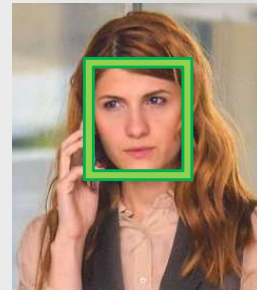
TEMPERATURE DETECTION

- ❑ Uses both visual and thermal cameras
- ❑ Measures facial temperatures, ignores non-facial temps
- ❑ Real-time high-temp alerts
- ❑ Pre- and post-measurement location tracking
- ❑ Integrate with access control systems

1. Detect face
2. Detect face temperature
3. Alert above threshold
4. Match face for high-temp ID

High Temp Alert

- Employee A205
- Female, Age 35-40
- Building 3
- 06/10/2020 – 11:20:31AM



ACCURATE FACE AND TEMPERATURE DETECTION

- ❑ Even with facemasks
- ❑ Across multiple people



<https://youtu.be/xUqQwubDI68>

CONTACTLESS ACCESS CONTROL

The screenshot shows the 'Add Alert' configuration window. It includes fields for 'Alert Name' and 'Add Notes'. Under 'Define Rule', the 'Alert Type' is set to 'Video Search'. Under 'Trigger (Optional)', the 'Trigger Action' is set to 'Email Notification'. A 'PPE' filter section is visible with icons for mask, helmet, and safety vest. A 'Quantity' field is set to 0.

Alert type: Video Search / Intrusion / Face Recognition / People Counting

Trigger actions:

- Email notification
- Mobile APP notification
- HTTP integration
- Alert in VMS

PPE filter: person with/without mask, helmet/hardhat, safety vest

- ❑ Use Face Recognition and/or License Plate Recognition to open doors and gates
- ❑ Use in conjunction with Facemask and/or Temperature Detection
- ❑ Integrate with 3rd party VMS and access control systems
- ❑ <https://www.youtube.com/watch?v=k7XGiVuXsl0>

THE VALUE OF INTELLIGENCE

Cameras alone	Cameras + IronYun Analytics
Data recorded, relevant information not extracted or only manually extracted	Data recorded and processed to reveal relevant information for real-time alerts and quick retrieval
Fixed functionality	Versatile system, analytics can be added to any camera in the network
Singular built-in analytic per camera, e.g., FR camera, LPR camera	Multiple analytics can be applied to the same camera (IronYun platform has 15+ analytic engines)
	High-accuracy 4 th -gen deep learning technology
	Low TCO



THANK YOU



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<https://ironyun.com/demo-video/>



THERMAL CAMERA DETAILS

- ❑ Shortlist of vetted thermal cameras
- ❑ Indoors, no backlight, single line
- ❑ One face detection at a time (entrance, transaction window, line)
- ❑ Eye-level up to 8', max 6-8' distance
- ❑ Calibrate on people with normal temperature or blackbody
- ❑ No blackbody calibration source required (lower solution cost)

HARDWARE DETAILS

- ❑ Selected thermal cameras for temperature measurement
- ❑ 97% ONVIF-compliant IP cameras for all other components
- ❑ Scalable server architecture based on the channels and analytics needed
- ❑ On-premise deployment maximizes data protection
- ❑ Edge device can be used as long as there is sufficient AI computing resource

Analytics	AI resource per channel
Temperature Detection	8
Distancing Detection	2
Facemask Detection	2
Occupancy Detection	8

