# Offerings on the AWIROS APPSTACK





## **Awiros AppStack**

The world's first Video Al App marketplace

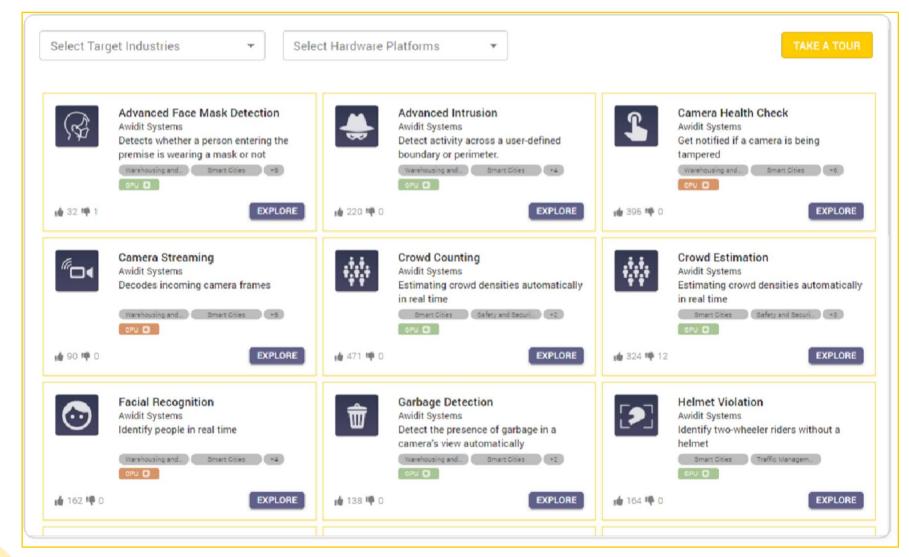
Video Al apps for multiple industry segments and multiple hardware

50+

Video Al Apps are available on the Awiros AppStack for a wide variety of industry verticals



Developers develop apps and host them on the AppStack





Users discover the apps for their needs and deploy them on their video sources

Visit Awiros Appstack

#### **Application** for a variety if industry segments

Click on your industry of interest to view available use cases



**Smart Cities** 



**Warehousing** 



**Smart Traffic** 



Retail



Manufacturing



**Smart Homes** 

#### Or view one of our flagship apps



















# **Apps for Smart and Safe Cities**

**Camera Health Monitoring** 

	Traffic Management Apps			Citizen Safety Apps
01	Automatic Number Plate Recognition (ANPR)		08	Abandoned Object Detection
02	Helmet Violation Detection		09	Attribute based Person Search
03	Vehicle Counting and Classification		10	Advanced Intrusion Detection
	Municipality Centric Apps		11	Facial Recognition
04	Pothole Detection		12	Thermal Management
05	Garbage Detection		13	Social Distancing Detection
	Law Enforcement Apps	I GMART TO THE STATE OF THE STA	14	Violence Detection
06	Large Scale Crowd Estimation and Management		15	Crowd Counting

#### **Automatic Number Plate Recognition (ANPR)**

A highly optimized Deep Learning based solution that recognizes number plates in real-time without using any kind of specialized cameras

- → No specialized ANPR cameras required, works with all kinds of vari-focal IP cameras
- → Uses Awiros' proprietary Bi-directional LSTM based OCR engine to recognize number plates with a character level accuracy of more than 95%.
- A single camera can be used for monitoring vehicles on multiple lanes.

# Tracking Vehicles of interest across locations

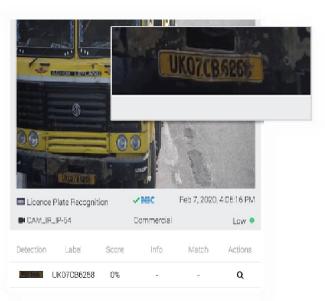
Using filters on the Awiros Grid, the app can also be used for tracking the movement of any Vehicle of Interest across locations



Watch Video

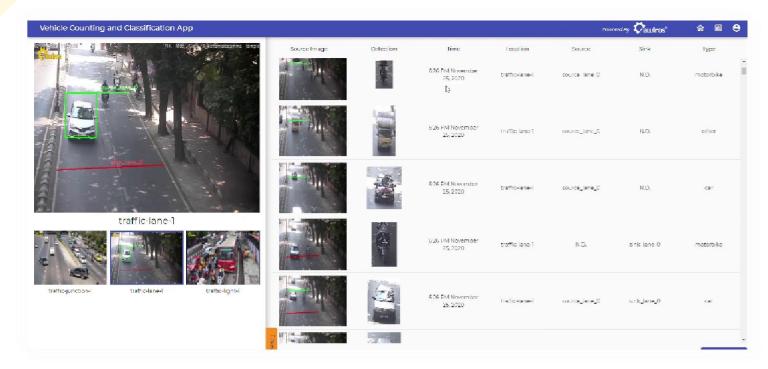


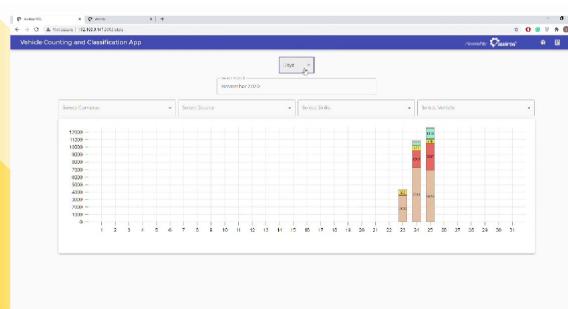




### Vehicle Counting and Classification

Identifies vehicle attributes such as type, color, make and model in real time while keeping a track of traffic volumes.



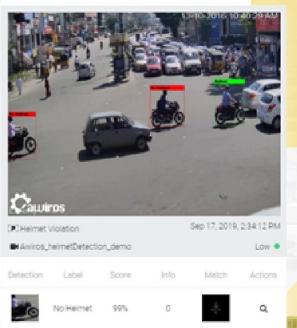


It also shows detailed statistics of traffic data which helps in identifying patterns in traffic movement



Two-wheeler riders who do not have a helmet on can be identified.





## **Facial Recognition**

Using Facial Recognition on CCTV cameras, every individual present on a certain premises can be identified.

Individuals can be assigned different severity levels.

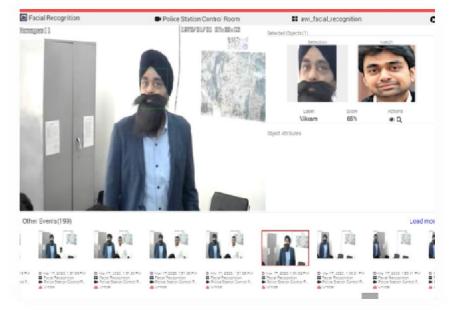
Partially obscured faces can also be identified



Watch Video

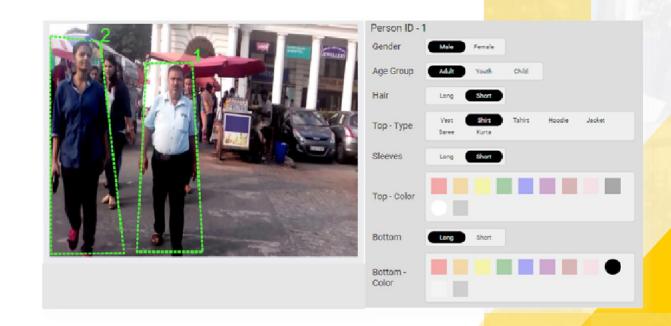
- → Deployed on 250+ cameras during the 33rd Surajkund International Art and Craft Fair in collaboration with Haryana Police
- → Awiros is the first DIPP registered startup to have its Facial Recognition listed on NIST







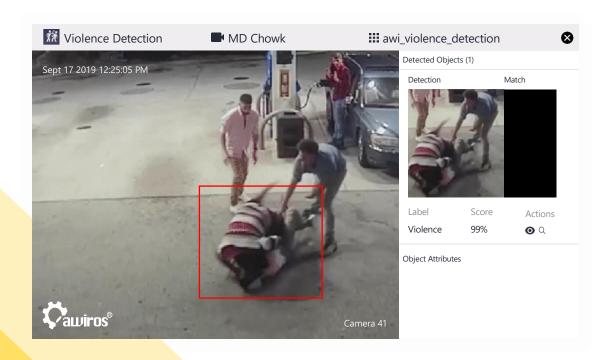
Search for a person of interest across camera locations based on general attributes such as gender, age-group, top-color





#### **Violence Detection**

The app allows you to set thresholds for the total number of people that may be present in an area and generates alerts if that number is crossed.

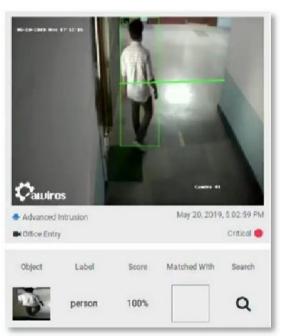


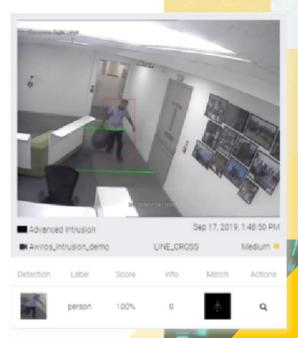


## **Advanced Intrusion** Detection

This application can be used for monitoring activity in and around a restricted perimeter. The user can define a 'fence' of any shape and dimensions within the camera view and the system generates alerts whenever there is activity across this perimeter. Using a Deep Learning based object classifier the application can also notify the user about the type of object that has crossed the perimeter



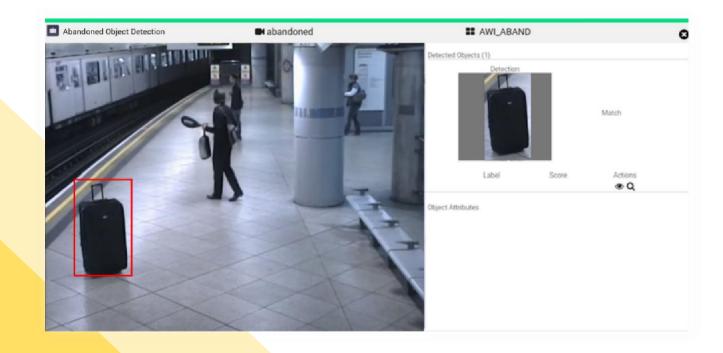






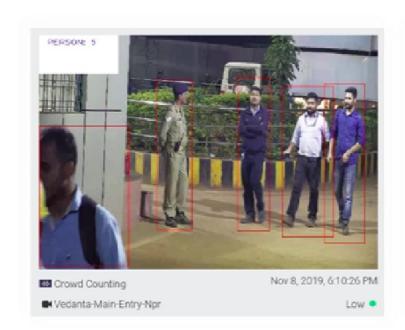
# Abandoned Object Detection

Abandoned/ Suspicious objects can be identified based on the duration for which they have been left unattended





The app allows you to set thresholds for the total number of people that may be present in an area and generates alerts if that number is crossed. This app can also help in ensuring social distancing.





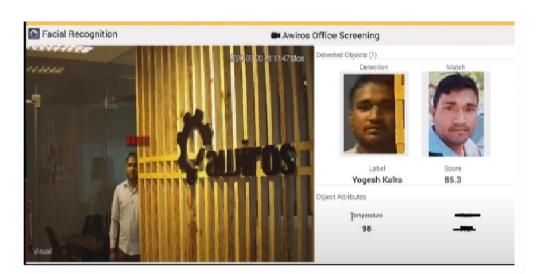


## **Thermal** Management

This app generates alerts if an individual is found to be having a high body temperature



Watch Video







## **Face Mask Detection**

This app automatically detects the absence of face masks on people's faces



Watch Video

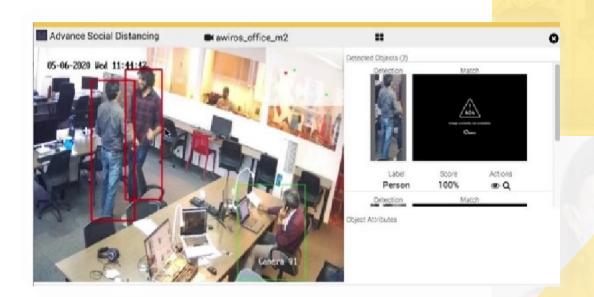


## **Social Distancing** Detection

This app generates alerts if the norms of social distancing are violated



Watch Video

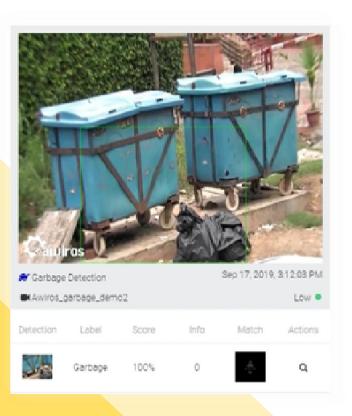




## **Garbage Detection**

Garbage accumulated in a region gets automatically identified



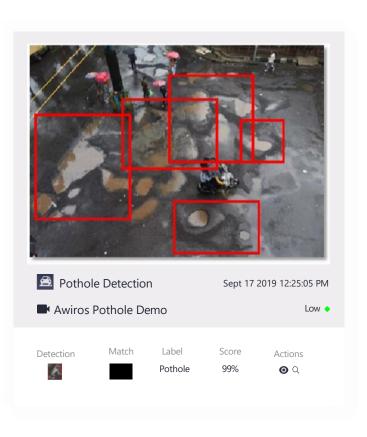






#### **Pothole Detection**

The app automatically detects the presence of potholes on the road



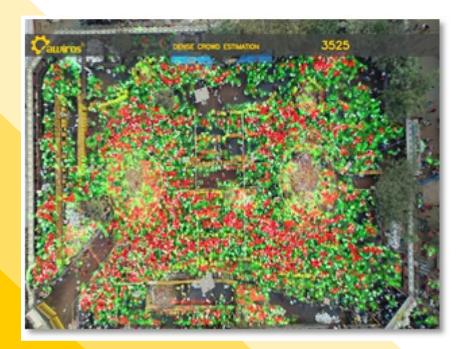


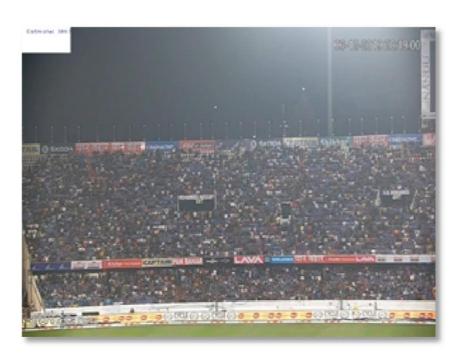


The Awiros Crowd Estimation app is used for estimating crowd volumes in case of very large crowds- of magnitudes varying from a few hundred to several thousands. This Deep Learning based solution estimates the total number of people present in a camera's field of view in real time.



# Winner of 2 National Level Governance Awards





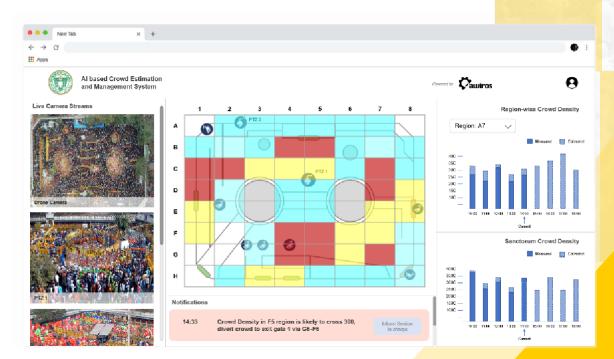
#### **Notable Projects**

India vs West Indies T20i match at Rajeev Gandhi Stadium, Hyderabad, 2019

The app was used for estimating the total number of people present in the stadium, which it estimated with an accuracy of more than 93%. Post this successful demonstration the app was formally launched for the state of **by angame**. Rama Rao, Hon'ble Minister of IT, Government of Telangana

#### Medaram Jathara Festival in Telangana, 2020

Medaram Jathara is the biggest tribal festival in all of Asia and sees the participation of close to 10 million devotees from several states every year. The Awiros Estimation App was used by the Telangana Police Department for monitoring the crowd at a number of different locations within the Sanctum Sanctorum.



## **Apps for Traffic Management**

#### **Traffic Management Apps Traffic Management Apps 05** 01 **Speed Violation Detection Automatic Number Plate Recognition (ANPR)** 02 06 Zebra Crossing Violation Detection **Helmet Violation Detection** 03 **07** Parking Violation Detection Vehicle Counting and Classification 80 Wrong Way Detection 04 **Red Light Violation Detection**

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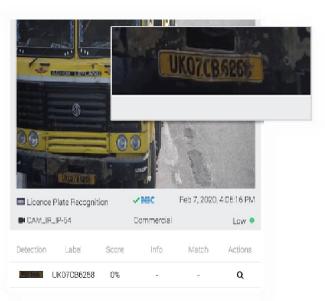
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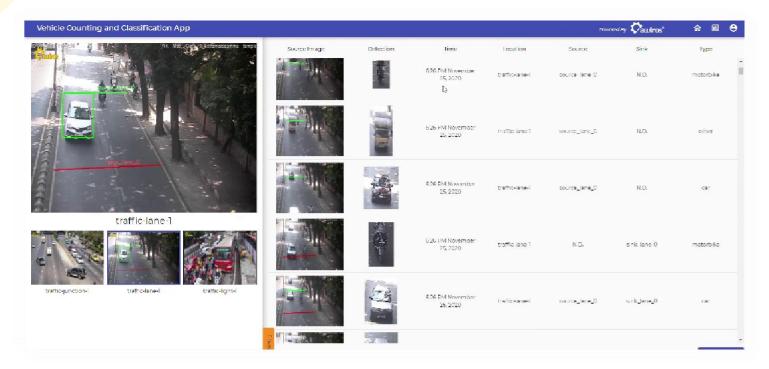


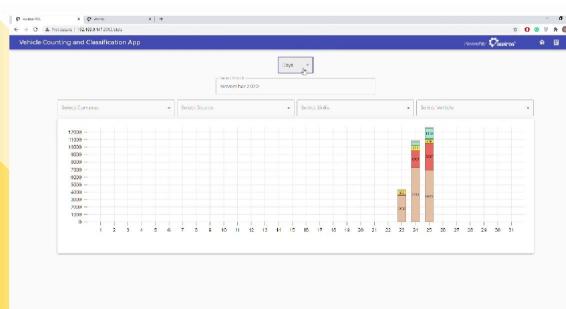




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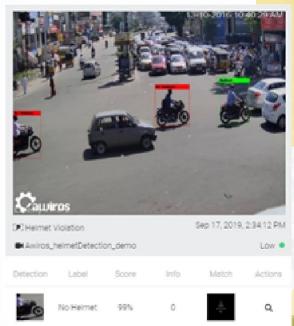


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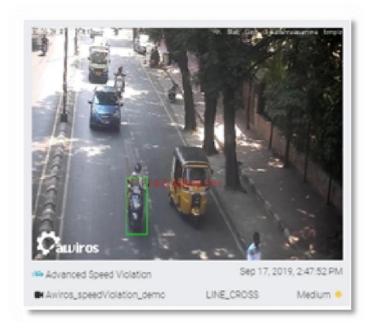


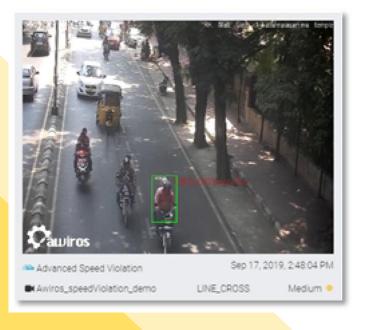




#### **Speed Violation**

Speed of any vehicle can be known in real time. The system can automatically generate alerts in case a vehicle is found to be violating the set speed limit.









#### **Zebra Crossing Violation**

Any vehicle found to be covering the zebra crossing area at the time of a red light gets automatically identified

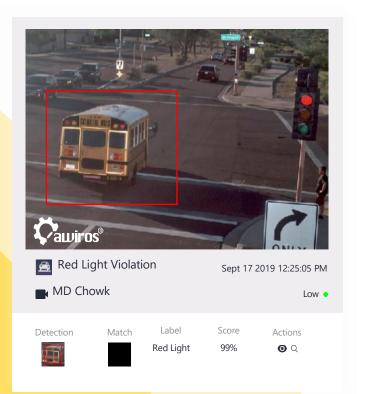




### **Parking Violation**

Wrongly parked vehicles can easily be identified







### **Red Light Violation**

Violation of traffic signals can be easily detected. With ANPR, this can also be used for identifying the vehicles involved in such violations.



#### **Wrong Way Detection**

This app allows user to define correct direction of traffic on any given road. Once that is done, any vehicle found to be moving in the opposite direction gets automatically identified.



## Apps for Manufacturing Industry

#### **Manufacturing Industry Apps**

01

Smoke Detection

02

Facial Recognition based Attendance
Management (FRAM)

03

Personal Protective Equipment (PPE) Detection



#### **Manufacturing Industry Apps**



Fire Detection



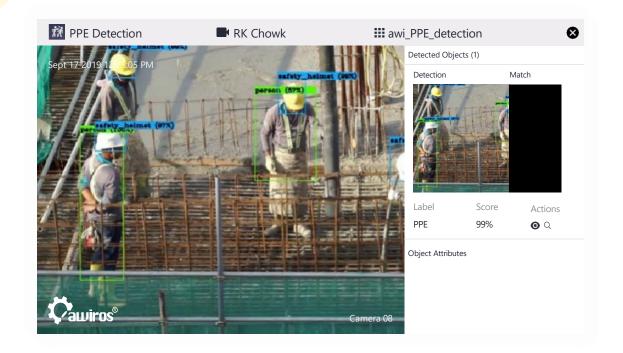
**05** 

Mobile Phone Usage Detection



## Personal Protective Equipment









This app detects the presence of protective equipment on personnel working in the field and generates an alert if a worker is found not to be wearing a certain piece of equipment.

## Automatically Detects

Safety Helmets

Safety vests

**Boots** 

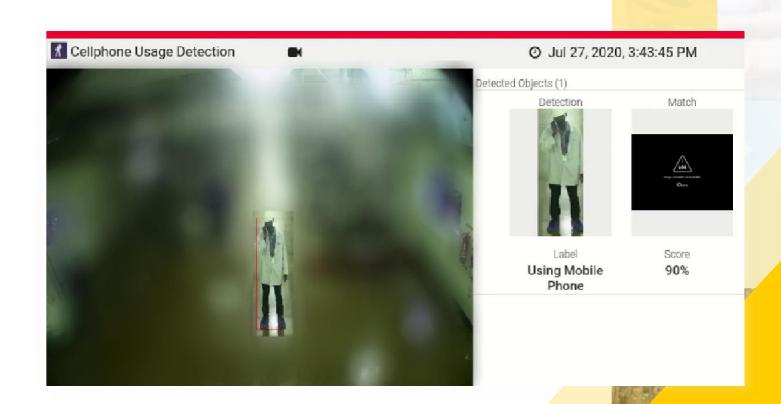
Gloves

Face Masks



# Mobile Phone Usage Detection

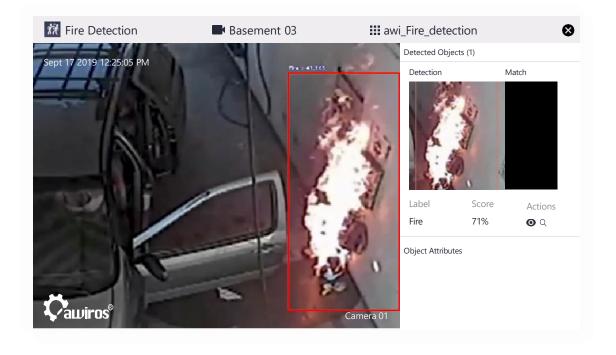
Get notified if a worker is using a mobile phone on the shop floor





#### **Fire Detection**







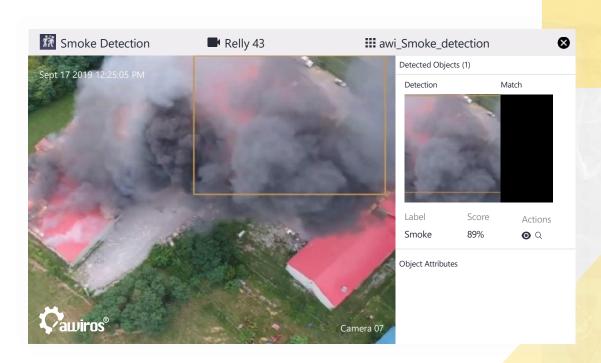
Detects the presence of fire in a camera's view



#### **Smoke Detection**

The app automatically detects the presence of smoke in a camera's view

#### Watch Video



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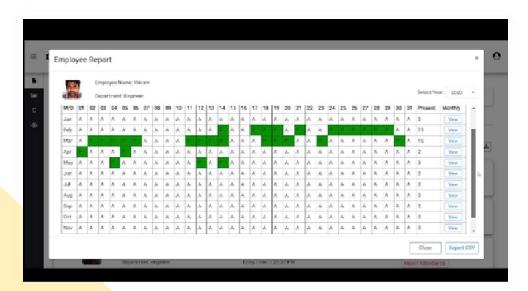
#### Facial Recognition based Attendance Management (FRAM)



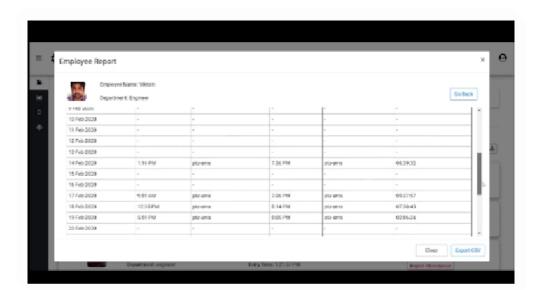
Track the attendance of all your employees using Facial Recognition



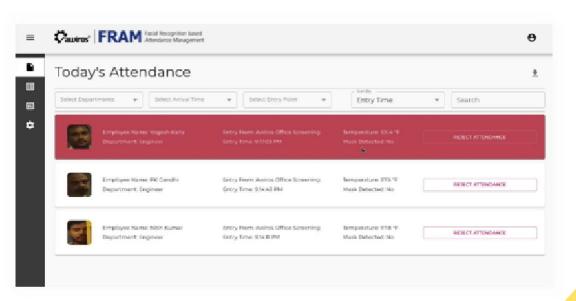
Mark your attendance using your face



View the yearly and monthly attendance record of each employee



Automatically keeps track of entry/exit time and location of every individual



Can also be integrated with Face Mask Detection/ Temperature monitoring system to highlight individuals with high body temperature or without face mask

## Apps for Retail

Customer Journey Tracking & Visual Inventory Management

01

Customer Journey Tracking

02

Visual Inventory Management



Footfall Analytics, Activity
Heatmaps & Dwell Time Estimation

Footfall Analytics

03

04

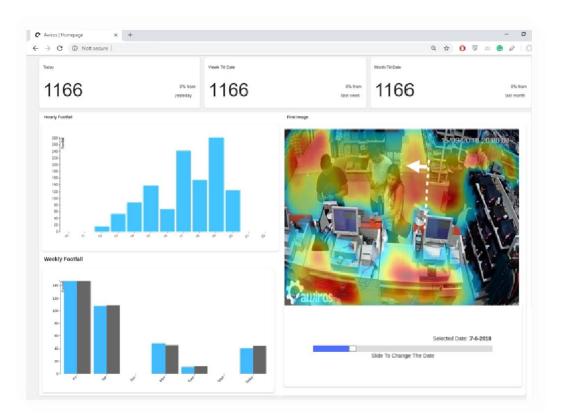
**05** 

Activity Heatmaps

Dwell Time Estimation

# FOOTFALL ANALYTICS

The Awiros Footfall
Analytics app provides
you with reliable footfall
data for every individual
store as well as for every
section within a store. This
data can be viewed for
every week, day and hour
and can be analyzed in a
number of ways to extract
valuable insights







#### **ACTIVITY HEATMAPS**

Comprehensive activity heatmaps help you in identifying your most active sections and subsequently, tracking customer interests.

These heatmaps can also help you in planning promotional campaigns



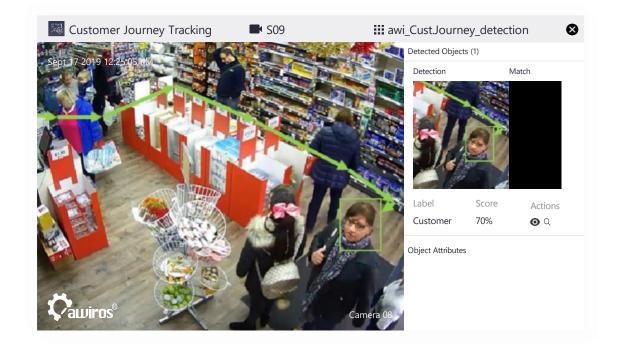
gained by promotional campaign

The Dwell Time Estimation app keeps track of the time spent by every customer inside the store. Using the dwell time data for multiple customers, the app then evaluates the average dwell time for every individual section within the store. Dwell time estimates can also be obtained for different customer demographics, such as age and gender. Dwell time estimates help in tracking customer interests as well as evaluating the amount of traction





## Customer Journey Tracking



Using Facial Recognition, the journey of every customer within the store can be tracked. By analyzing the journeys of multiple customers within the store the system can then evaluate the journey of an average customer within the store.

Customer characteristics such as age and gender can also be identified and that way typical customer journeys for different types of customers can also be identified.



The Visual Inventory Management system helps retailers in keeping track of the number of available items of a certain product.



Product: Persil Bio-W

No. of Units: 21

# **Apps for Warehouse Industry**

**Warehouse Industry Apps** 

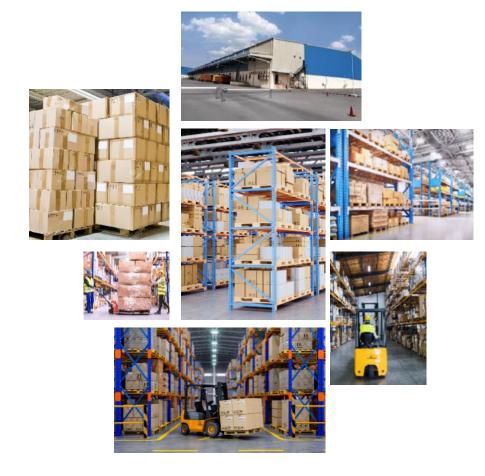
01

Visual Inventory

Management/ Box Counting

02

Bag/Object Counting



# Visual Inventory Management/ Box Counting

Keep a count of the number of different SKUs, automatically.





Watch Video





This app automatically keeps a count of the number of standard size bags that have been loaded/ unloaded.



# **Apps for Home Security**

01

Facial Recognition

**Home Security Apps** 

02



**Home Security Apps** 



03

04

Intrusion Detection



# Intrusion Detection Check the entry of intruders into your perimeter









#### **Facial Recognition**

Know about every individual who walks into your perimeter





#### **Illegal Parking Detection**

Know if a vehicle is improperly parked in and around your property



#### **Camera Health Monitoring**

This application generates an alert whenever the view of a camera is blocked, the camera's orientation is changed or the system is unable to receive feed from the camera. Along with notifying the user about a change in the camera's state, the app also notifies the user about the reason behind the generation of the alert using a proprietary deep learning based classifier.











#### **Office Address**

Awidit Systems Pvt. Ltd. 11, Vatika City Point, MG Road, Gurgaon (HR)-122002



@awirosweb



**Awiros** 



<u>Awiros Video Intelligence</u>

