



Trust.AI

(Trust.AI) User Manual

Safety Use Cases

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- **Introduction**

- .1 **Purpose**

This document aims to explain the operational procedure on how to use web-based (Trust.AI) System. It also explains the Use cases used in industry.

- .2 **Scope**

The scope of this document covers:

- Explaining the features of Trust.AI.
- Activities of users.

- .3 **URL or Web site address**

<https://trustai.industry-ai.com>

- **Trust.AI**

Trust.AI gives dynamic overview dashboard for monitoring the safety and security for worker.

It also provides live visualization of Alerts and Recommendation using AI and ML models.

Once a user enters the URL address of **Trust.AI** System in his/her browser, the following screen will be displayed. User has to enter the username and password provided by BLP for logging to the **Trust.AI**.



Trust.AI

Username

Password

Remember Me Forgot Password?

Sign In

Request a demo

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On successful login, user will be navigated to Dashboard Screen.

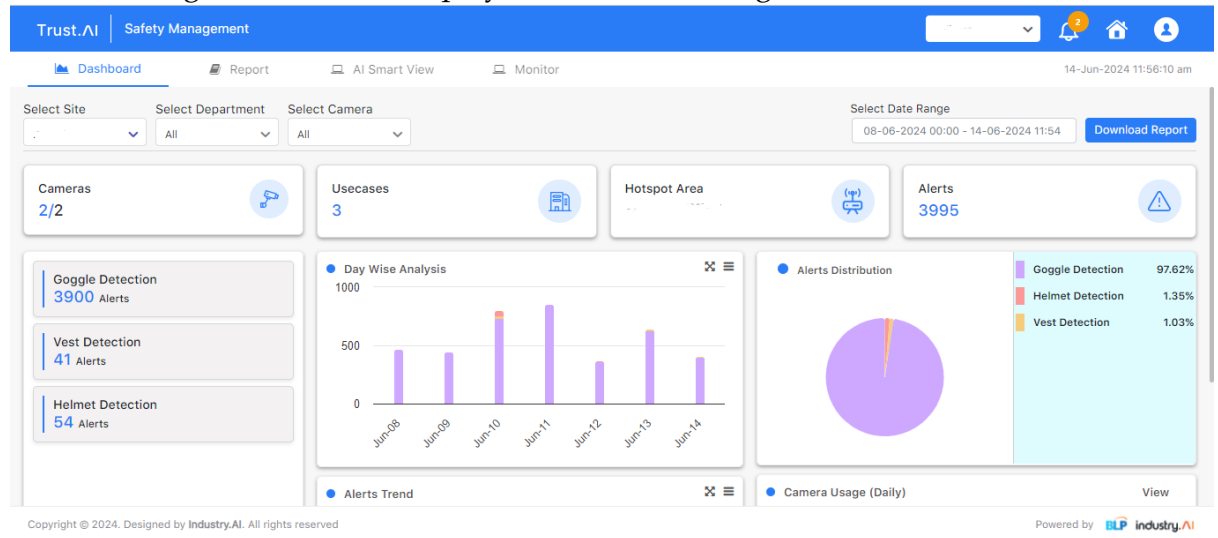
- **Dashboard Overview**

In this Dashboard screen you can monitor all the important use cases. The user has to select Month and Date of their choice to view details. The dashboard will give an overview of total Alerts of Shoe detection, Vest detection, Helmet detection, Intrusion detection.....etc., alerts raised. Apart from that we have a Total installed camera detail, Total use case, Active Camera

Use case are now being implemented globally

S.No	Use case	Business
1	Forklift To Forklift	Safety Management
2	Forklift To Person	Safety Management
3	Shoe Detection	Safety Management
4	Without Helmet	Safety Management
5	Phone Usage	Safety Management
6	Helmet Detection	Safety Management
7	Vest Detection	Safety Management
8	Glove Detection	Safety Management
9	MHE To Rack	Safety Management
10	Goggle Detection	Safety Management
11	Fall Detection	Safety Management
12	Crowd Detection	Security Management
13	Intruder Detection	Security Management

The following screen will be displayed on successful login.



The user can also see drop-down for sites, Department and Asset (Camera). There is also more functionality for Date range selection.

There is different type of trends available:

- Camera usage
- Alert Trends in Pie Diagram
- Day wise Analysis
- Camera wise Analysis

In the Dashboard we have one section called Today's Matrix

- Here we have Alert Distribution Chart
- Top detection Alerts

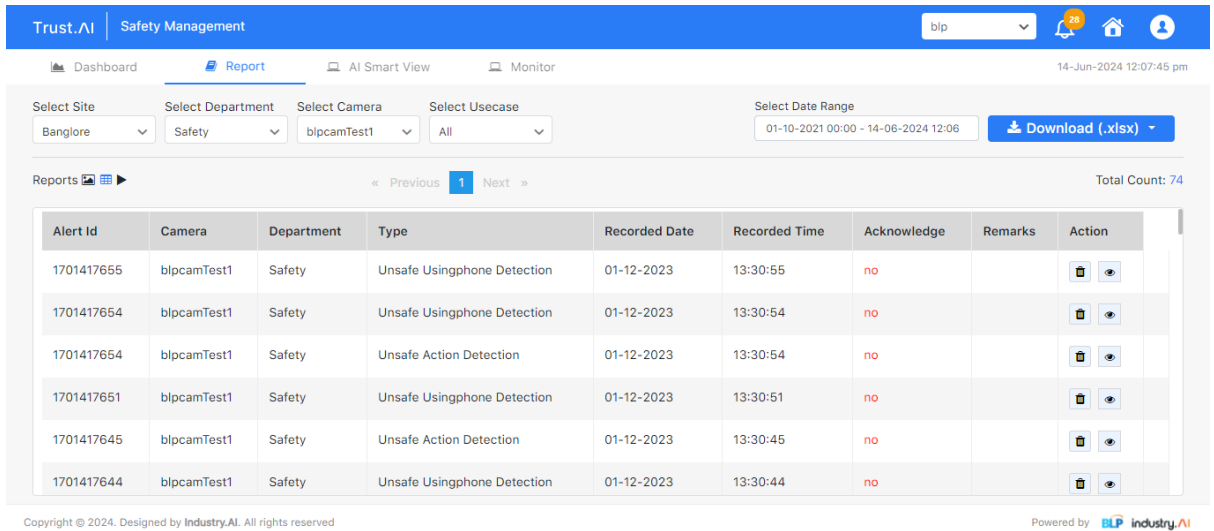
- **Report Screen:**

In Report Screen we can see the Use case in the form of Block and Icon: List of use case are given below:

- **Shoe Detection:** It will detect the safety shoes as trained in the model apart from that if person or worker is wearing some other shoes the model will show the alert "as without Shoe" if model is detecting a person with safety shoes and alert is showing without shoe then it is a false alert. While doing accuracy testing, we have to be very careful and attentive.
- **Goggle Detection:** The model should able to detect Safety Goggle inside the premises. If it detecting any other things like Cooler, Shades apart from Safety Goggle as Goggle detection then the model is giving false alert.

- **Mask Detection:** The model should be able to detect each type of mask and person should wear the mask properly like above the nose then only model will detect properly. If person is wearing the mask properly and still mask is giving the alert “without mask” then it’s giving the false alert and we immediately inform the visual analytics team fix the issues.
- **Using mobile Detection:** This use case will show the Escalation related to if any person using mobile inside the premises.

When we Click on Any use case Block, we will get Below Screen:



Here there is a functionality for site drop-down, department wise drop-down and Asset wise. If we will select the Site from drop-down only that site alerts will be visible in Alert listing page.

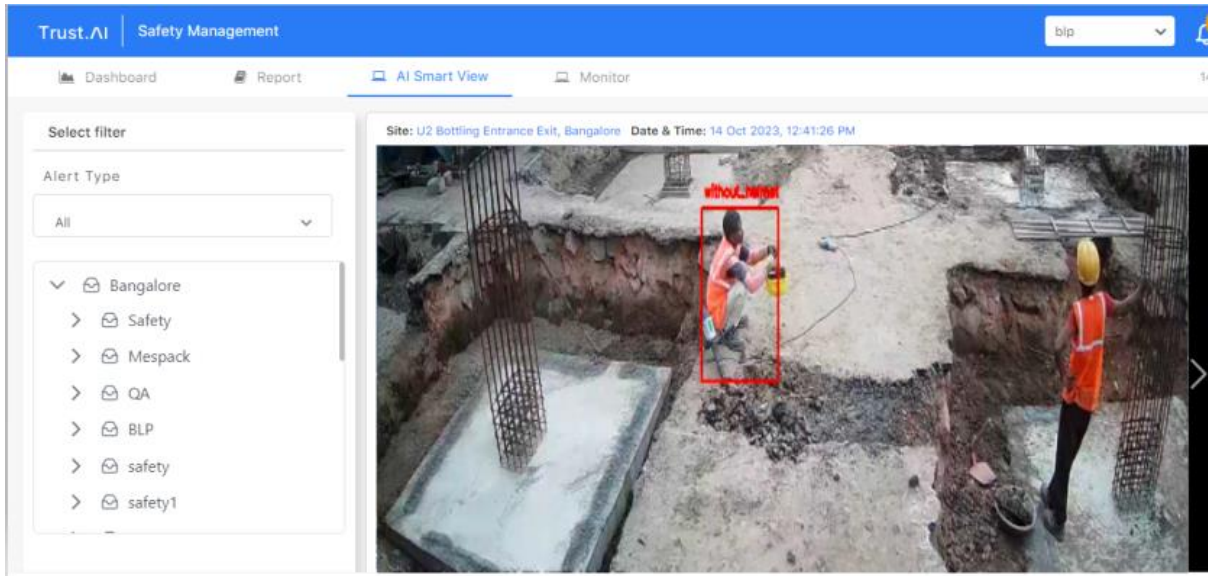
We have pagination facility here and date range selection facility as well.

Report we can see in the form of listing as well as image view. There is also download functionality for Image.

For Every type of use case, we get the same type of functionality and page design:

AI Smart View Page:

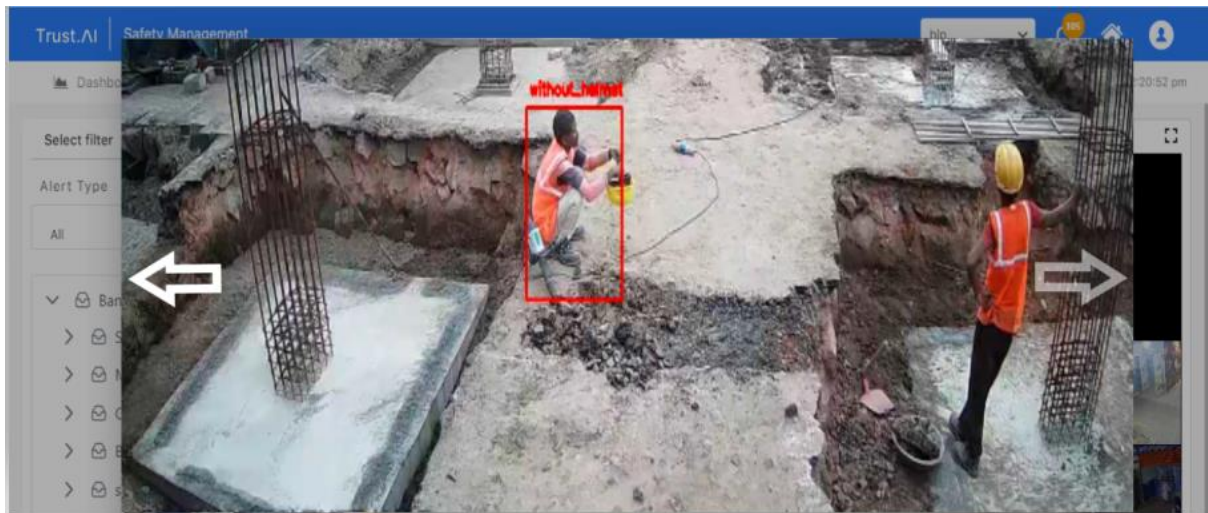
In this page we Can see the drop-down for Use case in type section. Here Can see the alert in Camara wise. If you will expand the site entire camera name will display below. There is swipe functionality of image available with that we can do accuracy testing easily.



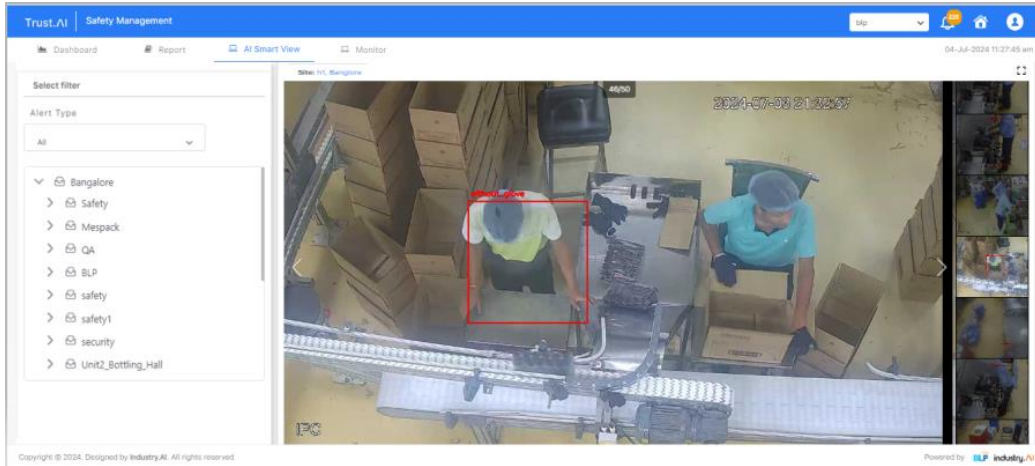
There is also a full screen view functionality and in this screen we have again a swapping functionality:

Below screen shows full view of the AI smart view page:

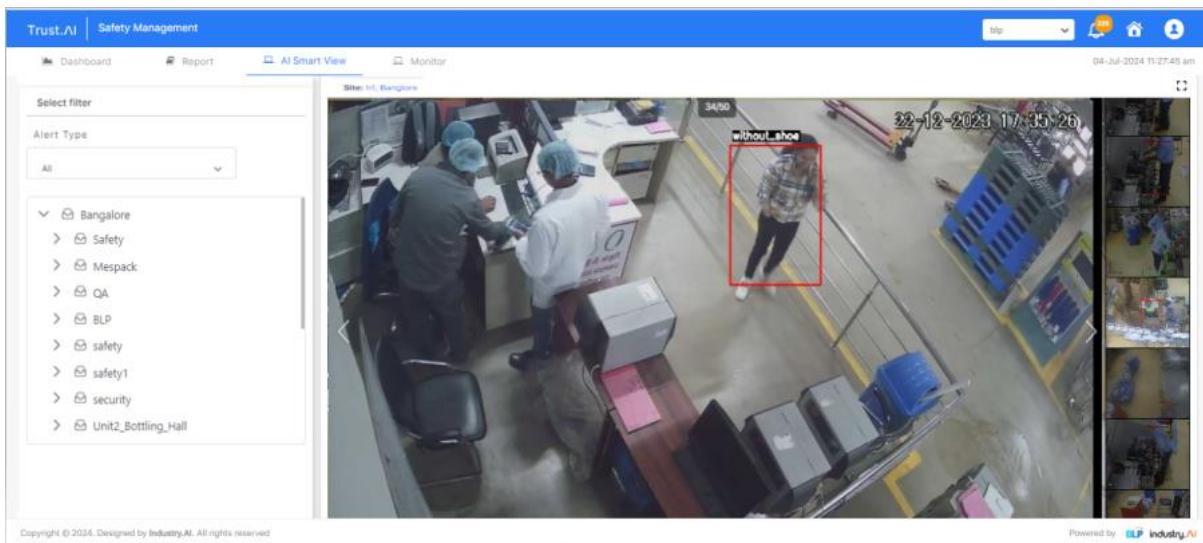
1. Helmet Detection;



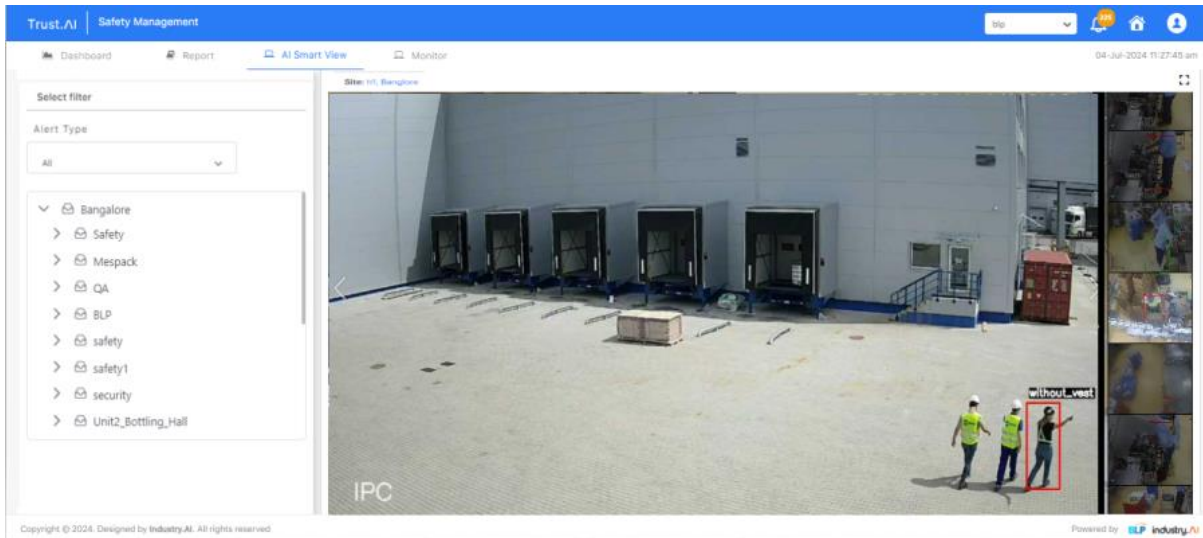
2. Glove Detection



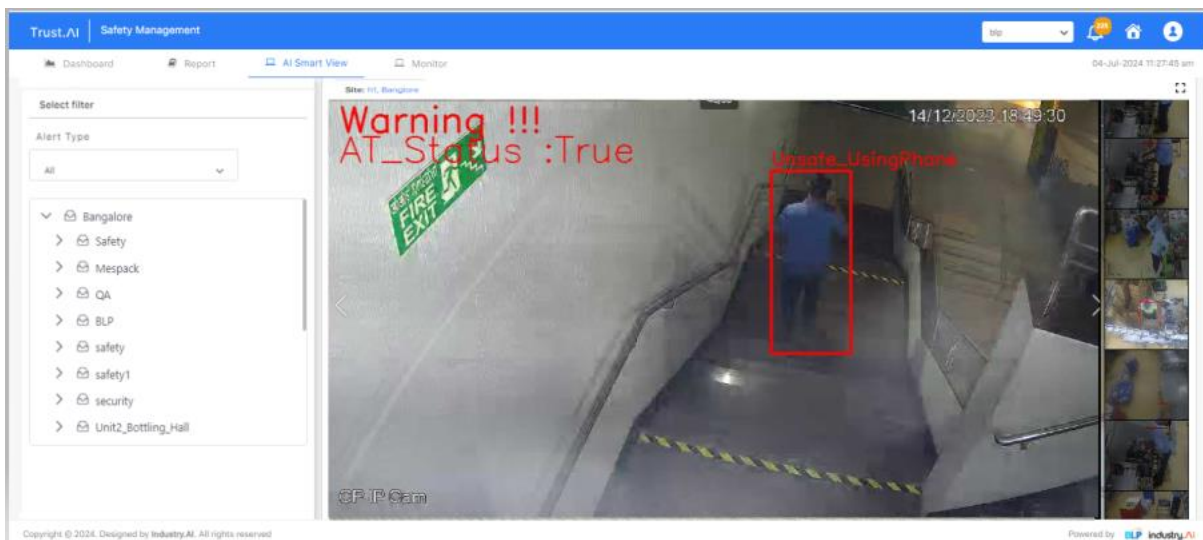
3. Safety Shoe Detection



4. Vest Detection

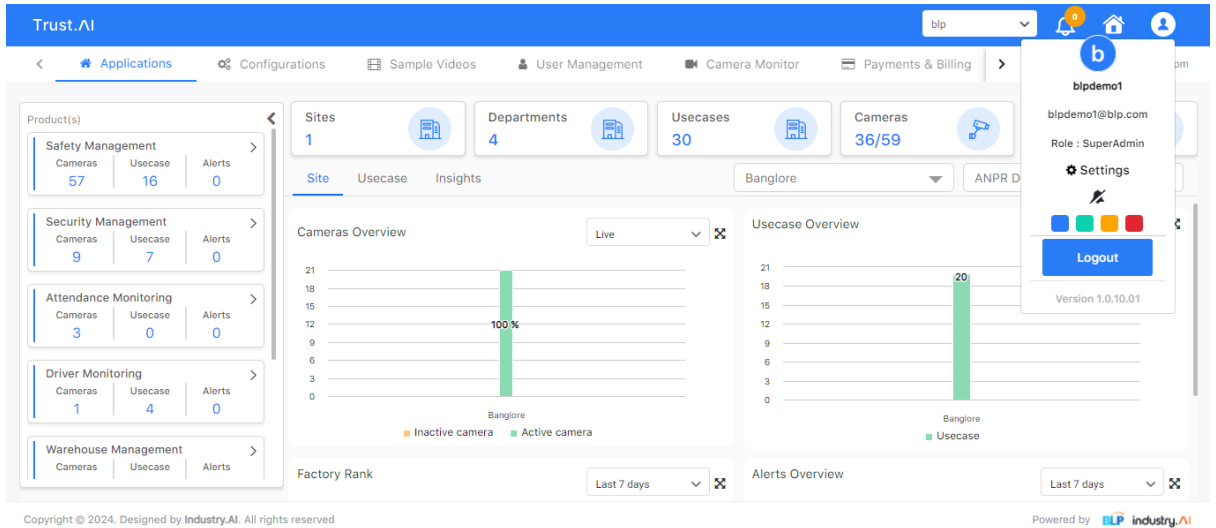


5. Using Mobile Detection



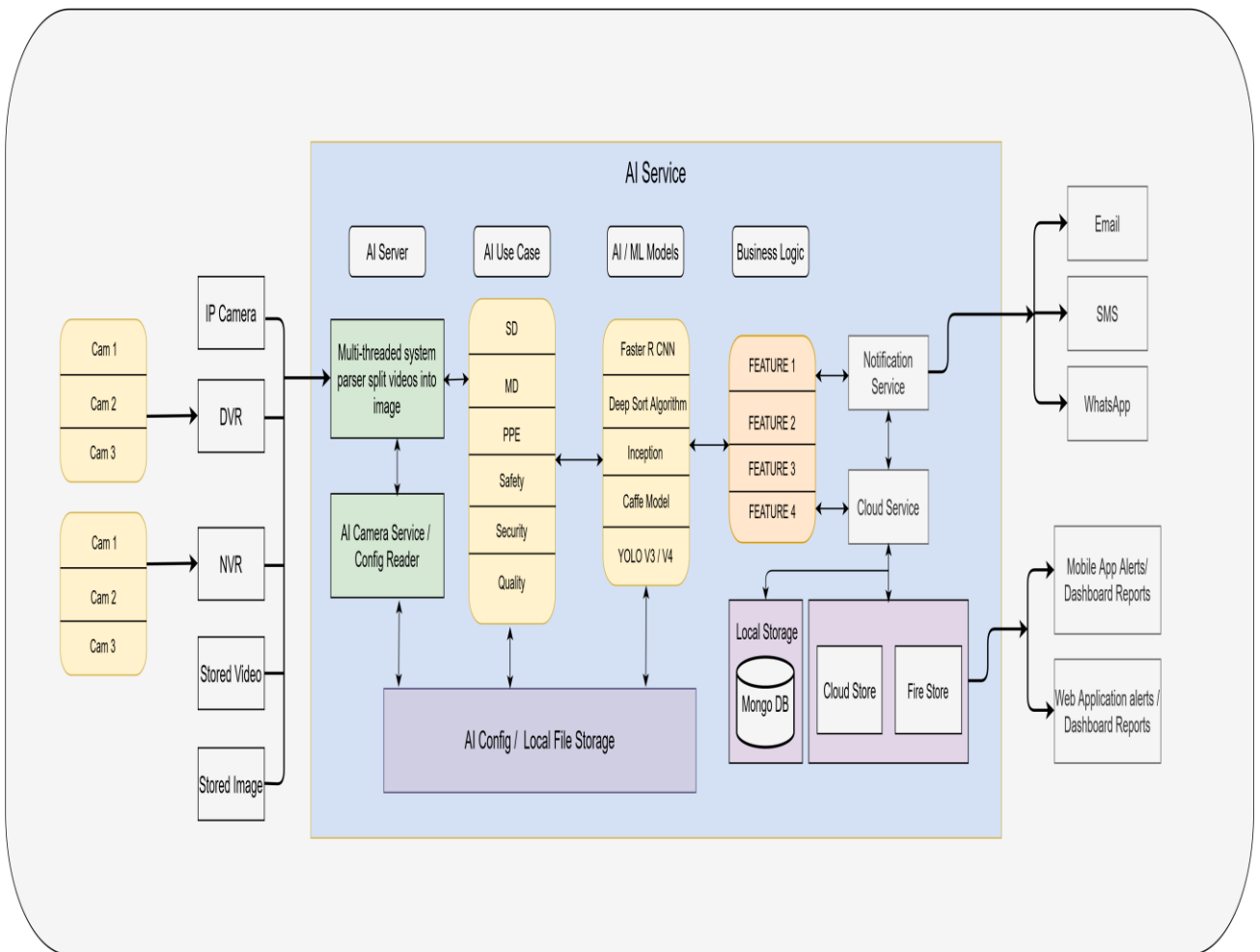
Logout functionality:

In right up corner we have Logout and Role functionality:
Below is the image:

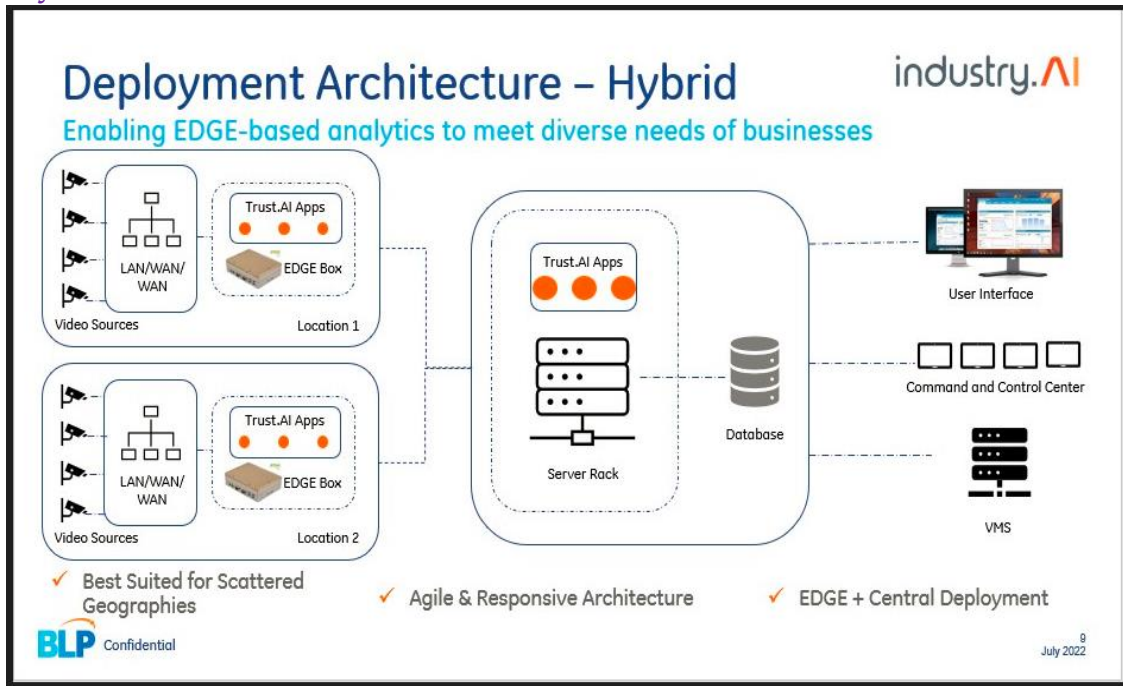


When you will click on logout button you will be logout from the application.

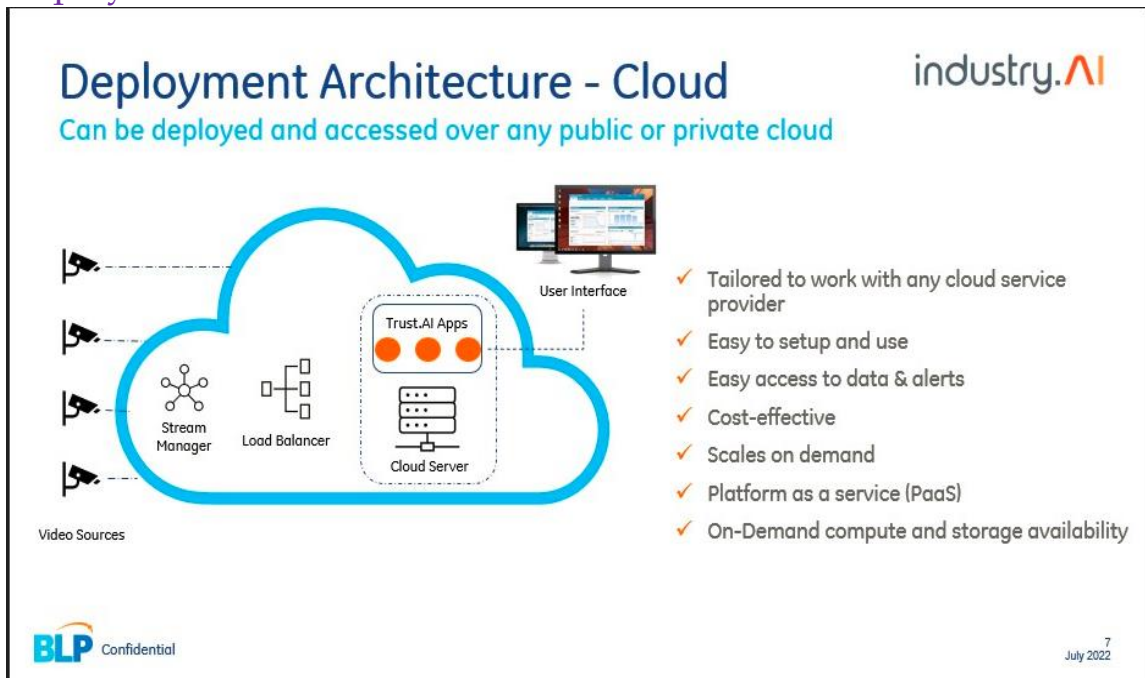
Architecture:



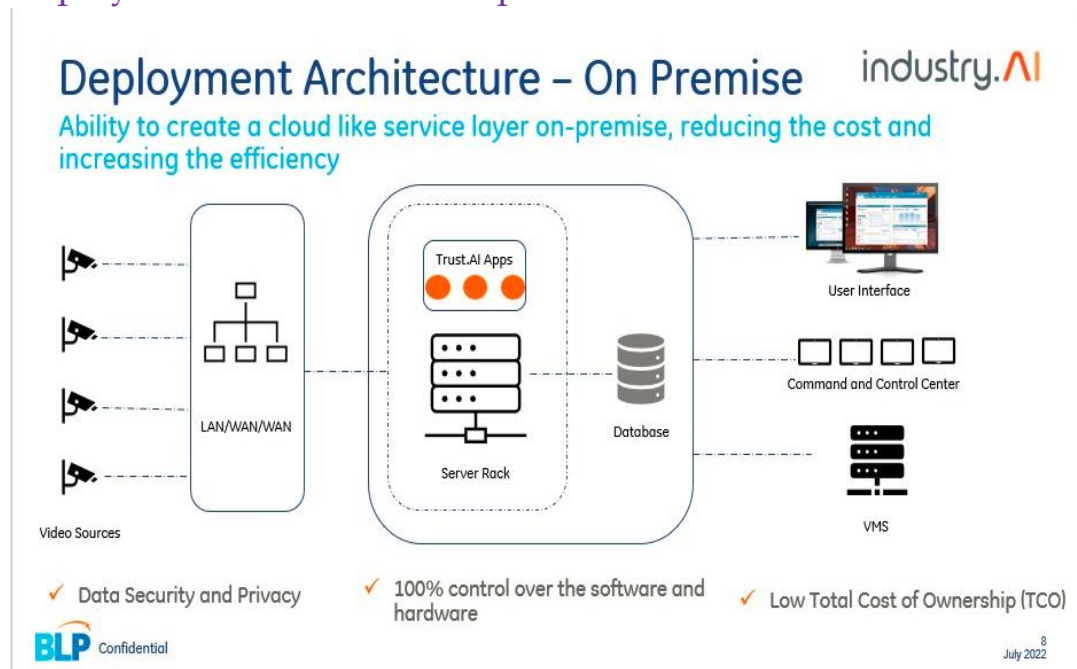
Hybrid Architecture:



Deployment Architecture Cloud:



Deployment Architecture on-premises:



Technologies used:

Visual Analytica Model: yolo v4 object detection, model classification models, image processing using open CV library, TensorFlow frame work, python

Back-end: node js

Front-end: Angular framework

Data Base: Firebase

..... **Thank You**