Manual of AI Edge Computing Platform

AVCiT Technology

2025.10

Content

1.Overview

1.1 Product Introduction

The AVCiT AI Edge Computing Box is a powerful edge computing node featuring a compact size and low power consumption. Equipped with 8GB or 128GB of memory and high-performance AI computing power, it comes with built-in algorithms supporting 8/16/32-channel video structuring and various behavior analysis algorithms. It is designed to meet the needs of security, safety supervision, transportation, and industrial manufacturing applications, delivering exceptional performance and intelligent analysis capabilities.

Figure1.1-1 AI Edge Computing Box—Basic Model

Figure1.1-2 AI Edge Computing Box—Pro Model

1.2 System Architecture

System Deployment Architecture:

The system supports video access from various brands of front-end cameras, connecting to aggregation points such as monitoring rooms where cameras and NVRs are located. It enables video stream acquisition from all cameras and utilizes AI edge computing nodes with reconfigured algorithms to perform facial and human capture, behavior recognition, intrusion detection, smoke and fire warning detection, and other analytical tasks. These event alerts can also be pushed to upper-level business platforms.

The AI edge computing nodes can manage devices and integrate with the large-screen platform or operator workstations. When a warning event occurs, the system can trigger a real-time pop-up alert along with an audible alarm to ensure prompt personnel response.

Figure1.2 System Topology

1.3 Usage Guidance

1.3.1 Login

Prepare a computer with Chrome browser installed (other browsers are also supported) for debugging and configuring the node.

Connect the device directly to the computer using a network cable (ensure the cable is plugged into the device's network port; for dual-network-port nodes, connect to the corresponding network segment port).

Figure1.3.1-1 Network Port

How to change PC's IP to visit AI platform?

- **The default IP address from the factory of AI box Network port-1 is 172.168.1.234.,Network Port-2 is 192.168.1.234. Please set the client PC's IP address to a static IP within 172.168.1.x or 192.168.1.x subnet.**
- **Dont set same IP as our ai box default IP address!**
- Network cable link to Network port-2,Open the network settings of the client PC, update the IPV4 address to 192.168.1.xxx, and save the changes.

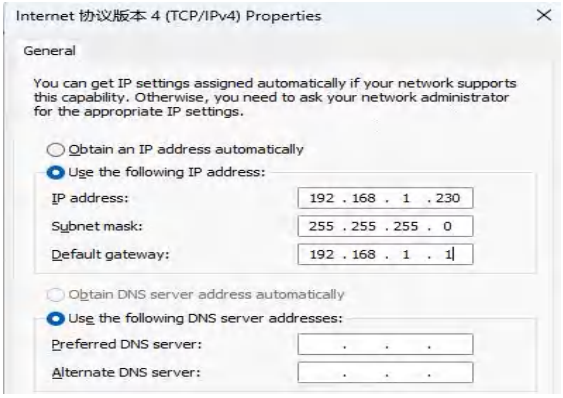


Figure1.3.1-2 Windows IP Configuration

- Open Chrome web browser, enter the address 192.168.1.234 and access the login menu (The device's default static IP is 192.168.1.234, with a Subnet mask to 255.255.255.0).
- Enter the initial username: admin, and password: admin, then click the Login button.

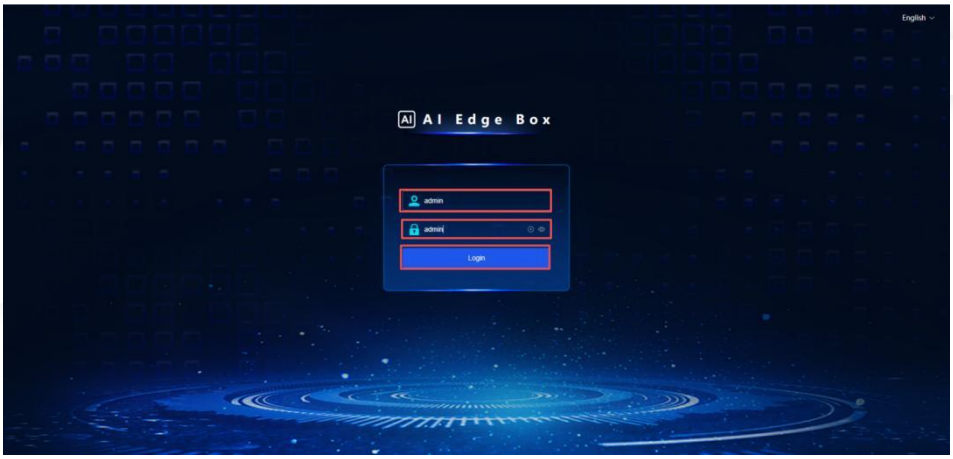


Figure1.3.1-3 Login Page

Main Menu：

After logging into the platform, the system will display the main menu, showing various information about the AI Edge Computing Platform.

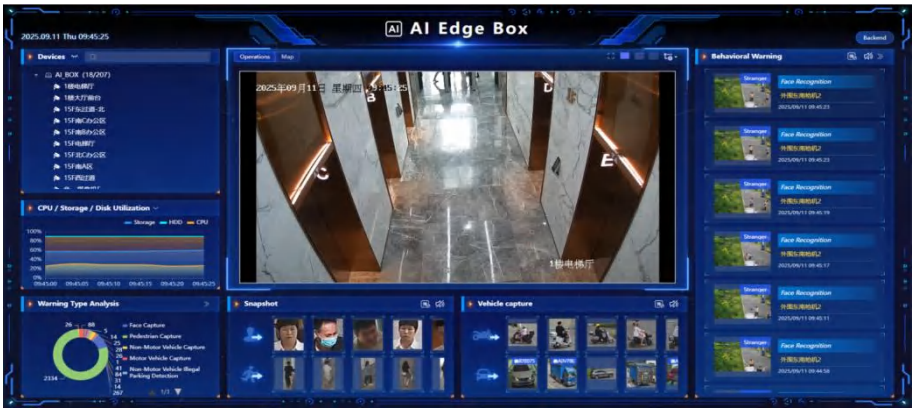


Figure1.3.1-4 Home Page

1.3.2 Network Setting

IP setting of AI box：

Click **[Backend]** to access the system settings menu. Then, click **[System]** button and navigate to the **[Network Configuration]** menu;Enter the IP Address, Subnet Mask, Gateway, DNS in the respective fields, and save the settings.

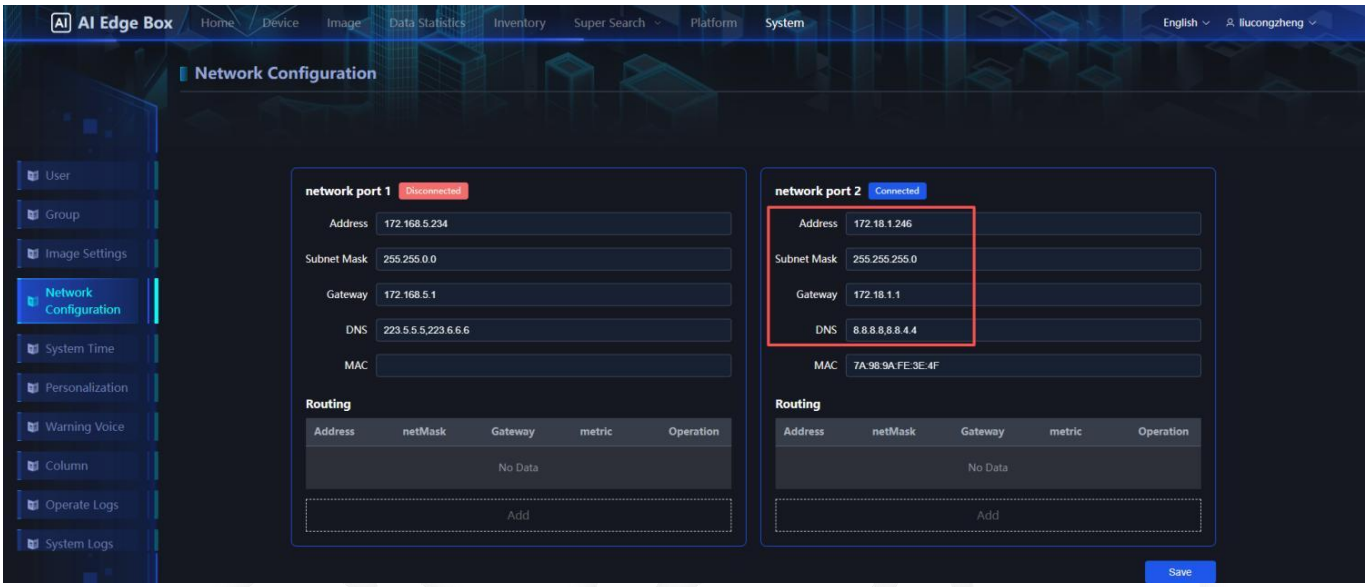


Figure1.3.2-1 Network Configuration

* The revised IP address should be carefully noted for record-keeping and future reference.

* Before modifying the node's IP, ensure that the intended IP address is not in conflict and can successfully access the network of the NVR or cameras to be integrated. If the cameras or NVR cannot be reached, please contact the network administrator to coordinate and obtain a suitable IP.

After modifying the IP, unplug the network cable from the client PC and connect it to the LAN switch. At this point, other computers within the local network should be able to access the node using the assigned IP address.

Network reset:

Press and hold the SEARCH button on the node’s main panel to reset the default network address.

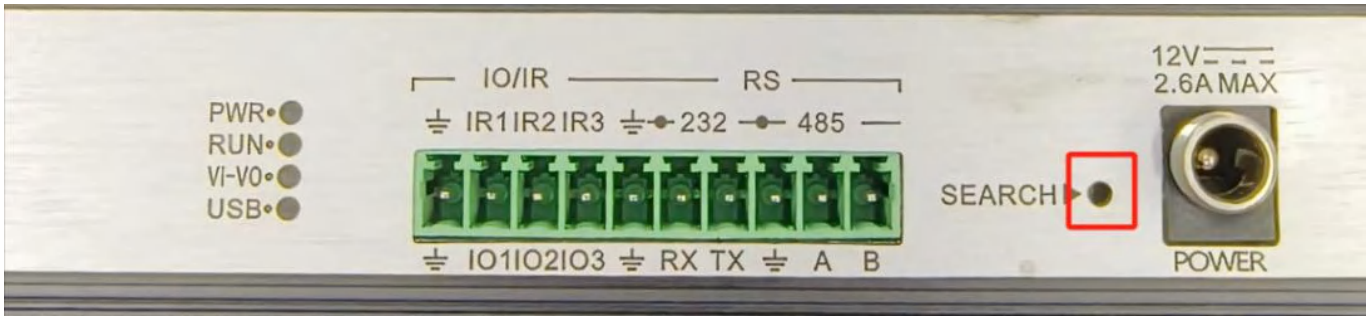


Figure1.3.2-2 Network Address Reset Button

1.3.3 Video Preview

After configuring the video, the platform offers two preview methods to help users view and check the video access status:

①Home page preview:

Open the video access list on the left side of the system homepage. Select the video want to preview, click and hold the left mouse button, then drag it to the video preview window to play the real-time video. If playback is unavailable, verify the video access information is correct. If the information is correct but the video still does not play, please contact the operations and maintenance personnel.

Figure1.3.3-1 Home Page Video Preview Page

②Video channel preview:

In device management, under video channel configuration, you can also click the preview button to view the access of each video channel:

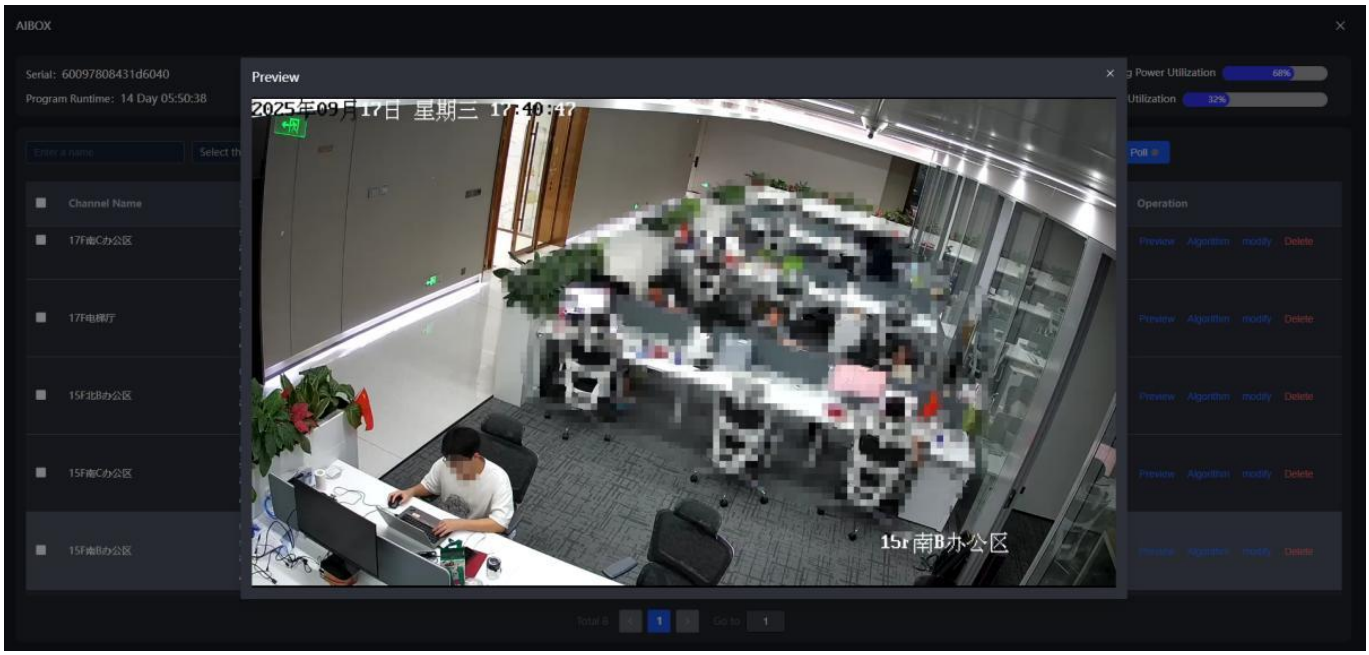


Figure1.3.3-2 Video Channel Preview Page

1.3.4 Algorithms Setting

①Home Page Algorithm Setting

After videos is added,go back to the **[Home]** page,**move ur mouse to the [Devices frame]**,to the video name.It will show up the hide configuration window,click **[Algorithm]**,then u can confiure the algorithm to the video.

Figure1.3.4-1 Video Channel Preview Page

②Device-Channel Page Algorithm Setting

After adding video sources in the Device-Channel page, the platform requires you to add algorithms to each channel. Simply click **[Algorithms]** to access the algorithm settings menu.

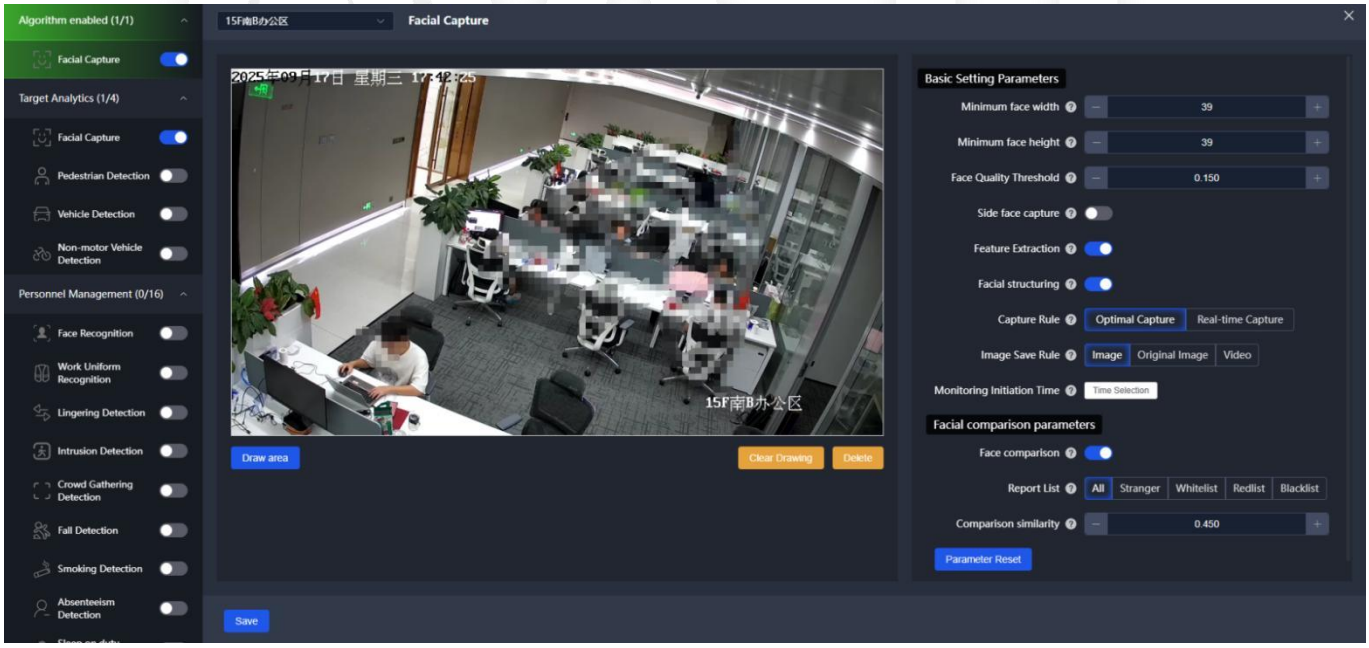


Figure1.3.4-2 Algorithms Menu

- The left side of the menu displays the list of algorithms currently supported by the platform, including Pedestrian Detection, Vehicle Detection, Personnel Management, Vehicle Management, Environment Monitoring, Data Traffic Statistics, others coming soon.
- The right side allows you to configure the selected algorithms. The detection area can be set to a specific position after activation **[Start Drawing]** and saving the configuration.

[Enable Channel]

After completing the configuration, click **[Save]** and return to the Video Channel Page. Configure each video stream one by one, then return to the Video Channel List interface. Click the **[Enable Channel]** to start the algorithm analysis.

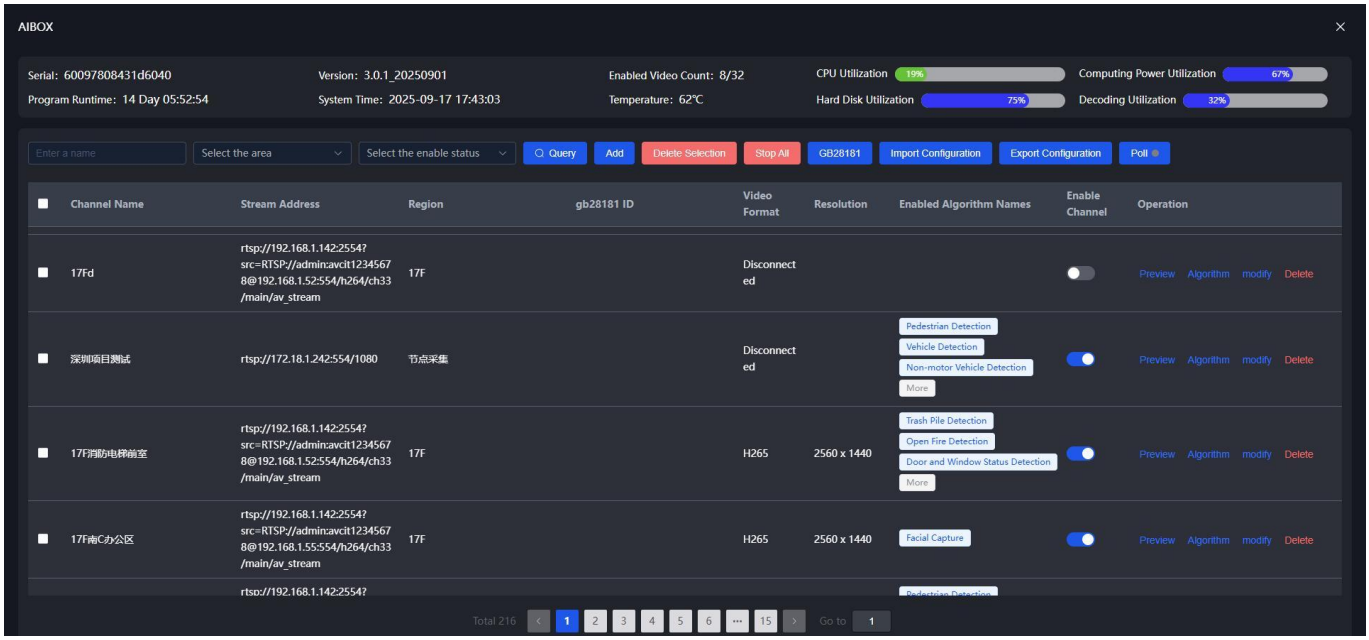


Figure1.3.4-3 How To Start Algorithm Analysis

1.3.5 Home

1.3.5.1 Devices

It can see all the video source access into the node(Whether it is the master node or the child node),here are its function:

①**Video preview**

See 1.3.3 Video Preview ①Home page preview

②**Algorithm Setting**

See 1.3.4 Algorithm Setting ①Home Page Algorithm Setting

Figure1.3.5.1 Home Page Device Frame

1.3.5.2 CPU/Storage/Disk Utilization

It can **Real-time monitoring of the CPU usage rate, Storage occupancy rate and HDD usage rate** of the system helps users intuitively understand the usage status of system resources, so as to promptly detect problems such as resource overload and ensure the stable operation of the system.

❖ **Parameter Interpretation**:

①**CPU**: It represents the usage rate of the Central Processing Unit (CPU) and reflects the busyness of CPU resources.

②**Storage**: It refers to the proportion of storage resources occupied, reflecting the usage of the system's storage capacity.

③**HDD**: That is, the usage rate of the hard disk, which shows the occupancy status of the hard disk space.———affect by 1.4.2.3 Image Setting—Image Cyclic Storage Percentage Threshold

Figure1.3.5.2 Home Page CPU/Storage/Disk Utilization Frame

1.3.5.3 Device Status

It can check the offline status of the camera or node.

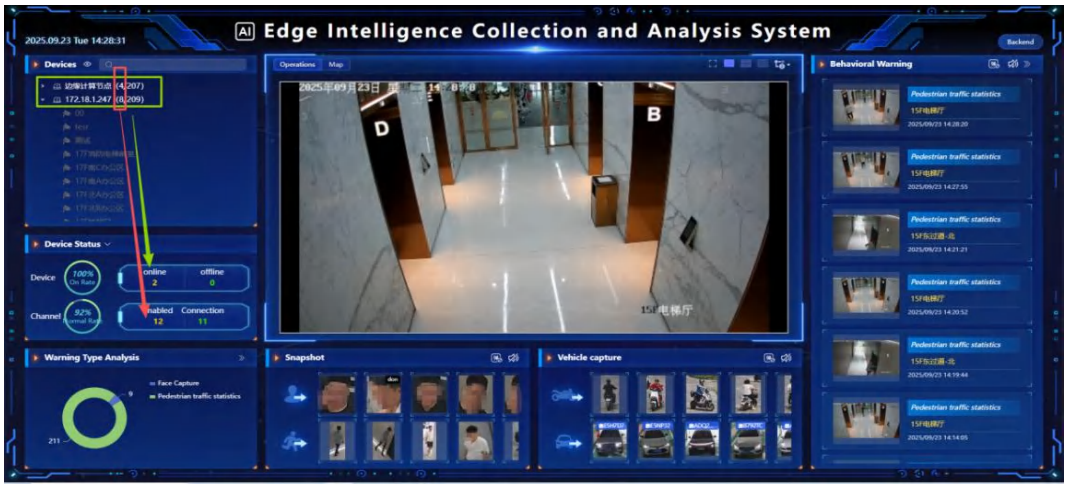


Figure1.3.5.3 Device Status Frame

1.3.5.4 Bandwidth(M bps)

It enables managers to understand the usage status of network resources from the fluctuations in the usage of uplink and downlink bandwidth.

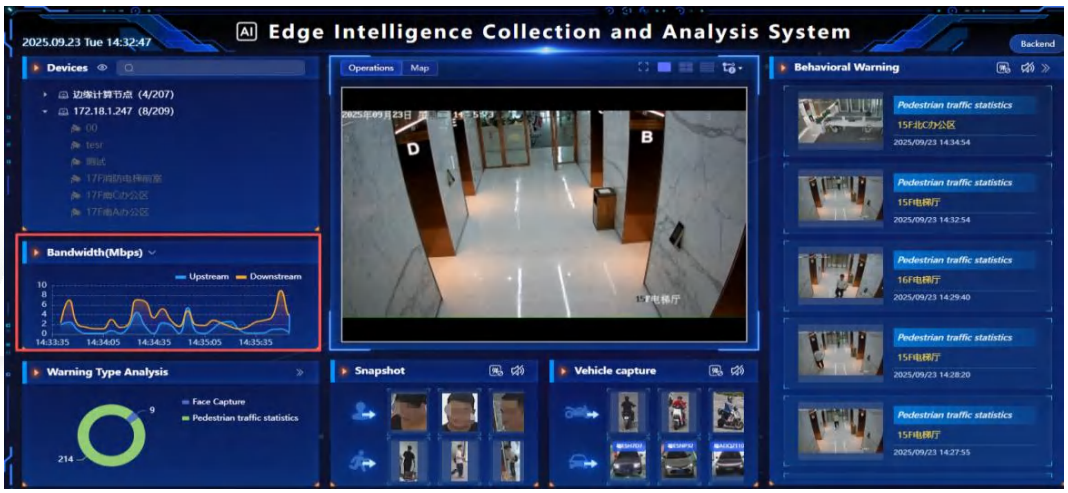


Figure1.3.5.3 Bandwidth Frame

1.3.5.5 Pedestrian Traffic Count

It can count each camera open “Pedestrian Traffic Statistic” algorithm’s today's traffic and current count.Click “modify” can change current count and reset current count personalized.

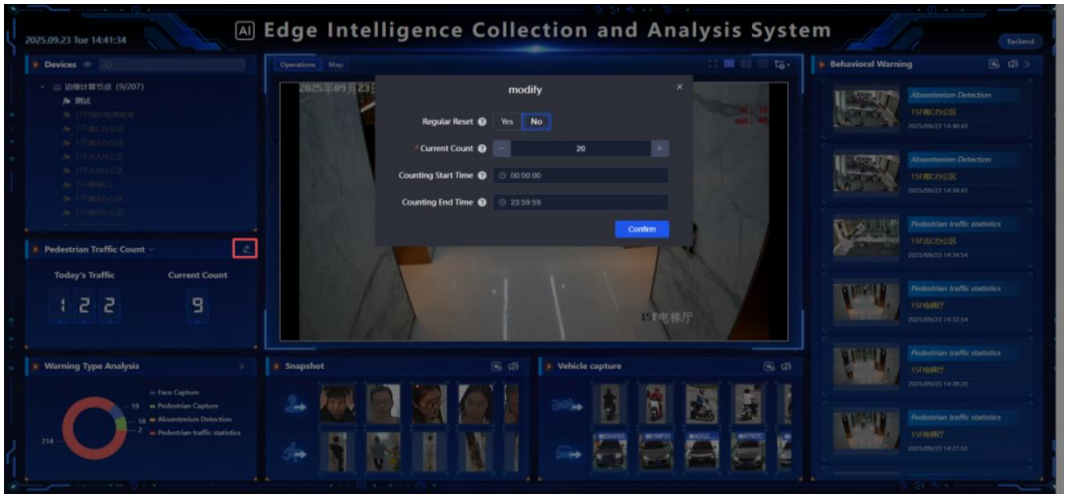


Figure1.3.5.5 Pedestrian Traffic Count Frame

1.3.5.6 Warning Type Analysis

See 1.3.8 Data Statistics ①Home page brief statistic

Figure1.3.5.6 Warning Type Analysis Frame

1.3.5.7 Warning pop-up and voice

The system features a built-in pop-up alarm prompt function. When an alarm event occurs, the front-end system will display a pop-up window with an alert. If the prompt is not needed, click the pop-up icon in the upper-right corner to disable it.

- **Snapshot frame and Vehicle capture frame**——only detect those in the Inventory(Face/Work wear/License Plate) can have warning pop-up and voice.
- **Behavioral Warning frame**——open the “Warning pop-up” button and “Play alarm voice” button,when detect is successful,it will show up pop-up and/or play alarm voice.

Figure1.3.5.7 Warning Pop-up And Voice Button

1.3.5.8 Map Mode

①The system provides online map access mode, switching map mode on the right side, and the default use is the online API of Amap. If you want to use other maps, please configure the corresponding API

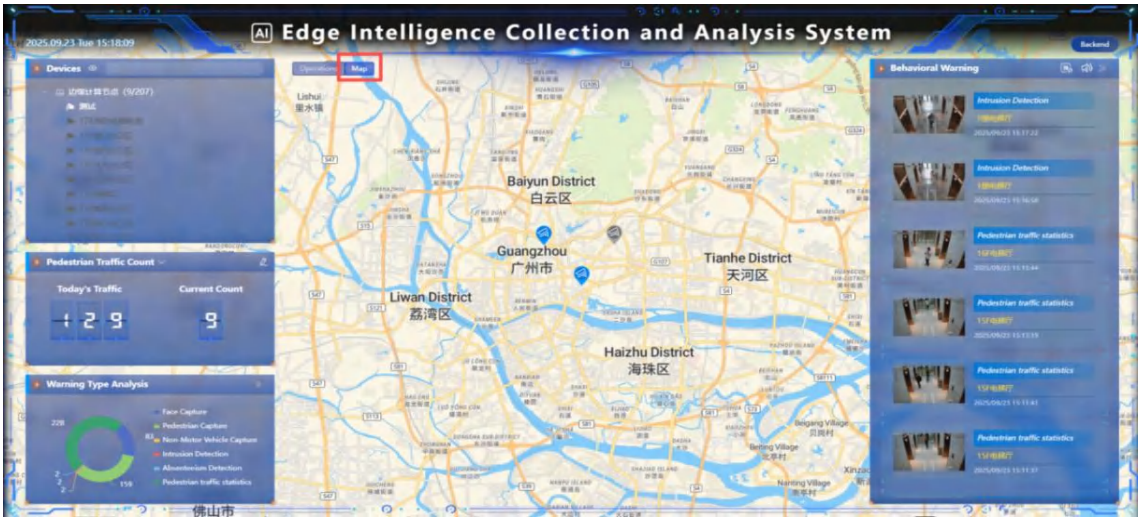


Figure1.3.5.8-1 Open Map Mode

Map configuration parameters:

- Center Point——the current system of geographical location, every time to open the map, there by the default location, latitude and longitude can query through the following website: http://jingweidu.757dy.com/

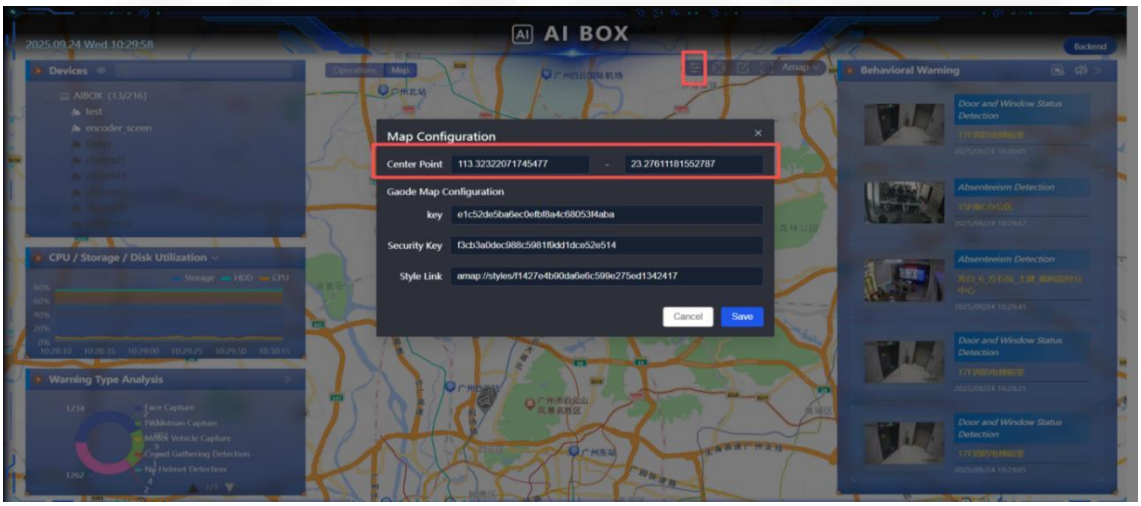


Figure1.3.5.8-2 Configure Center Point

- Key/Security Key/Style Link can configure personalized.

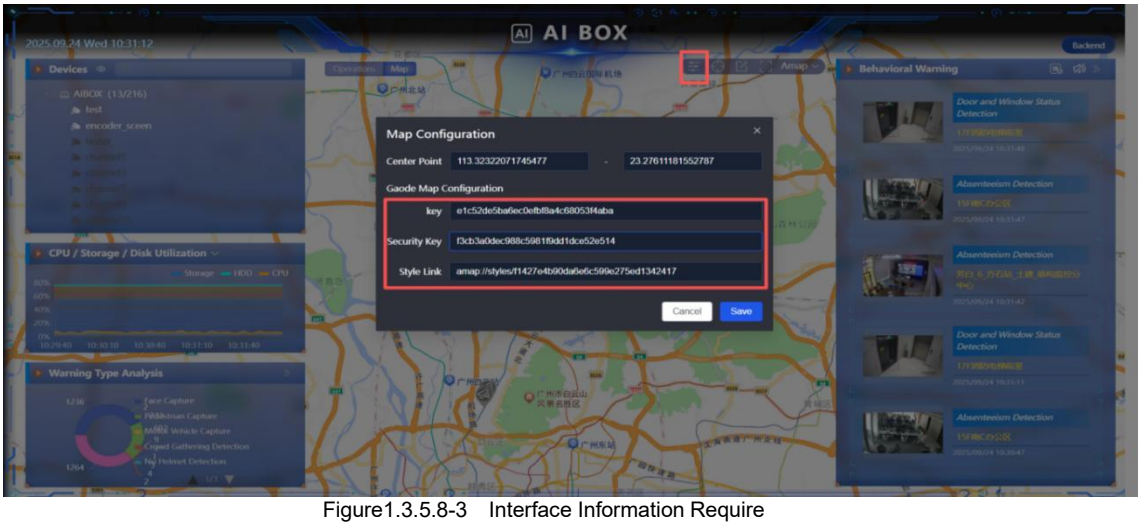


Figure1.3.5.8-3 Interface Information Require

②How to place the camera into the map?

In map mode，the “Point Insert Edit” button,the camera can be placed in the map to achieve [Map Trajectory] function.

1. click “Point Insert Edit”,then show up a pop-up window,input password AVCIT@admin123 into map edit mode.

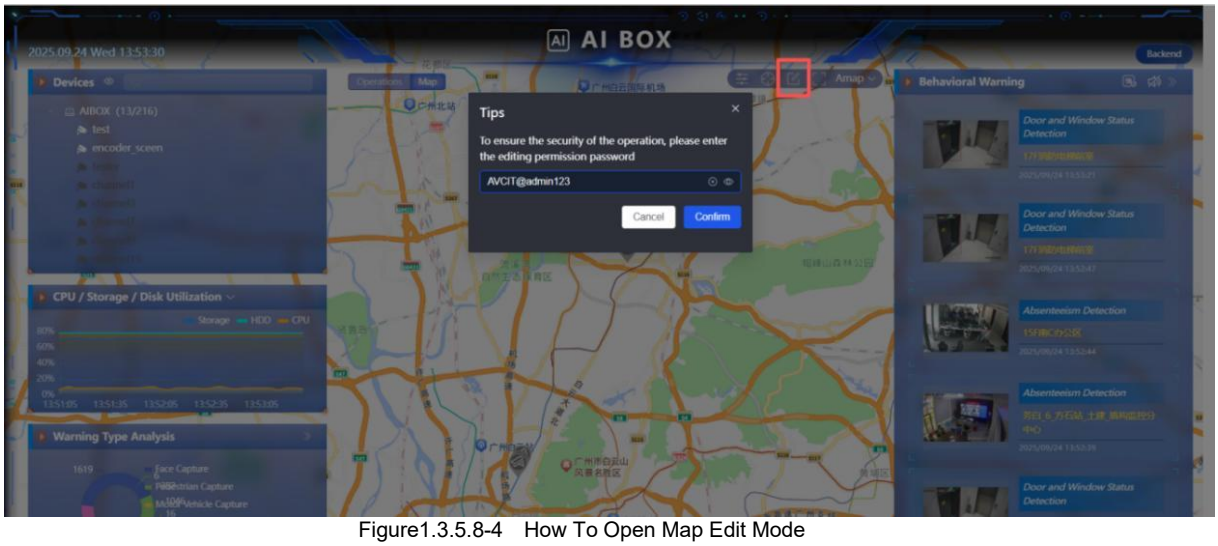


Figure1.3.5.8-4 How To Open Map Edit Mode

2. Move the mouse to [Device] frame,then drag it into the map,the camera will show as blue spot in the map.

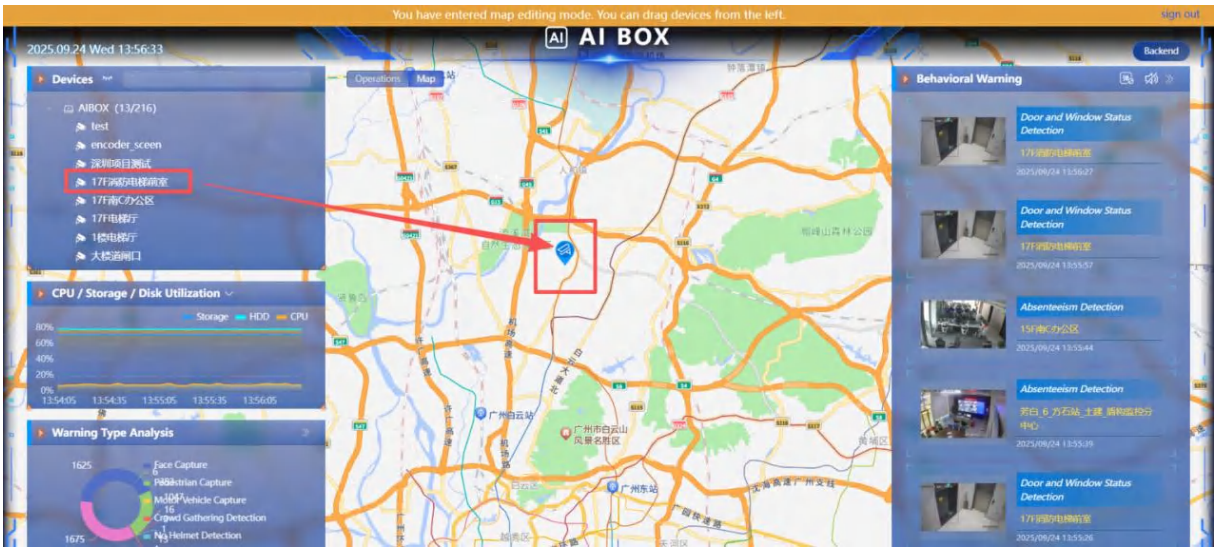


Figure1.3.5.8-4 How To Add Camera Into The Map

3. If don’t want the camera in the map,click the blue spot,use [backspace] or [detele] button to delete it

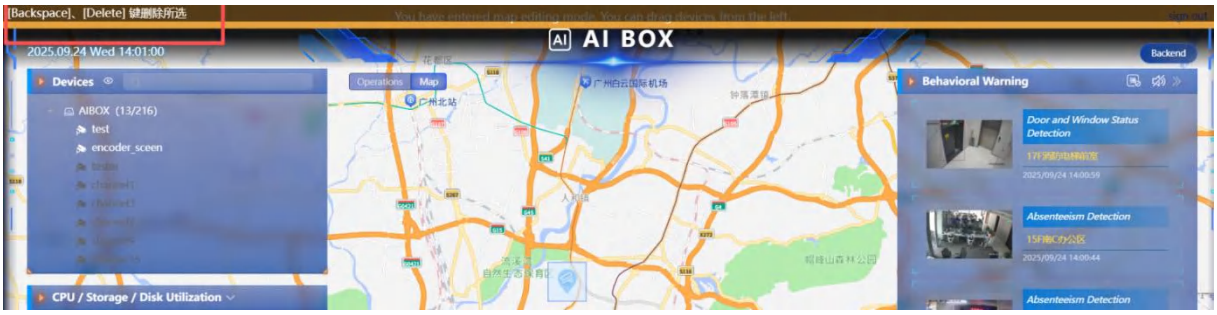


Figure1.3.5.8-4 How To Delete Camera In The Map

1.3.6 Device

1.3.6.1 Video Sources Access

The system now just supports connections via RTSP and RTMP streaming, temporary dont support onvif etc protocol.

Click **[Device]** to access the device menu, then click **[Channel]** to search for existing IP camera channels.

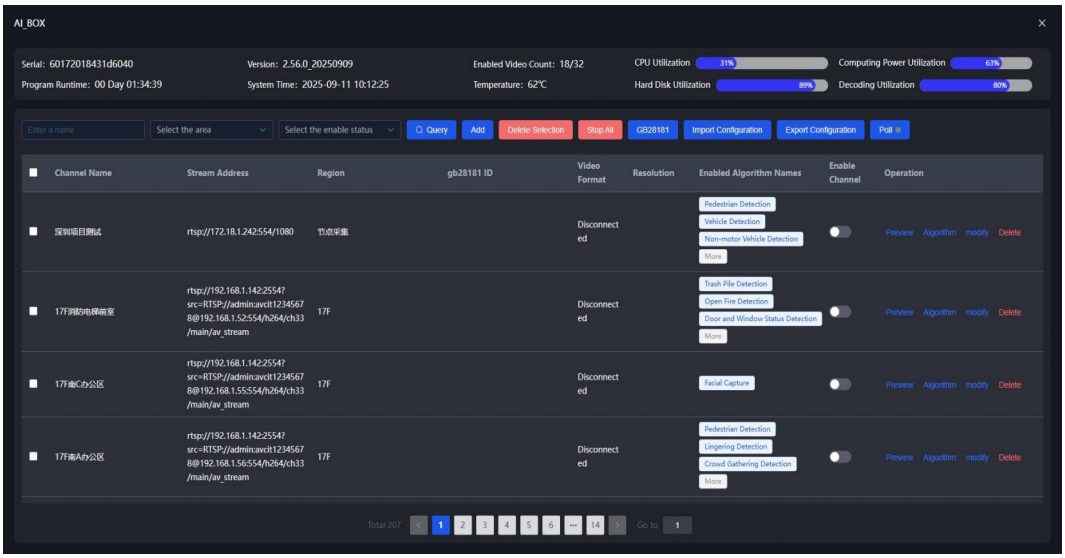


Figure1.3.3-1 Video Channel List Page

●Add New Channel*(Single video)* :

Click **[Add],**will show a pop-up,**the red asterisks are required fields**(Video Name,Video URL,Region),then click **[Confirm]**.

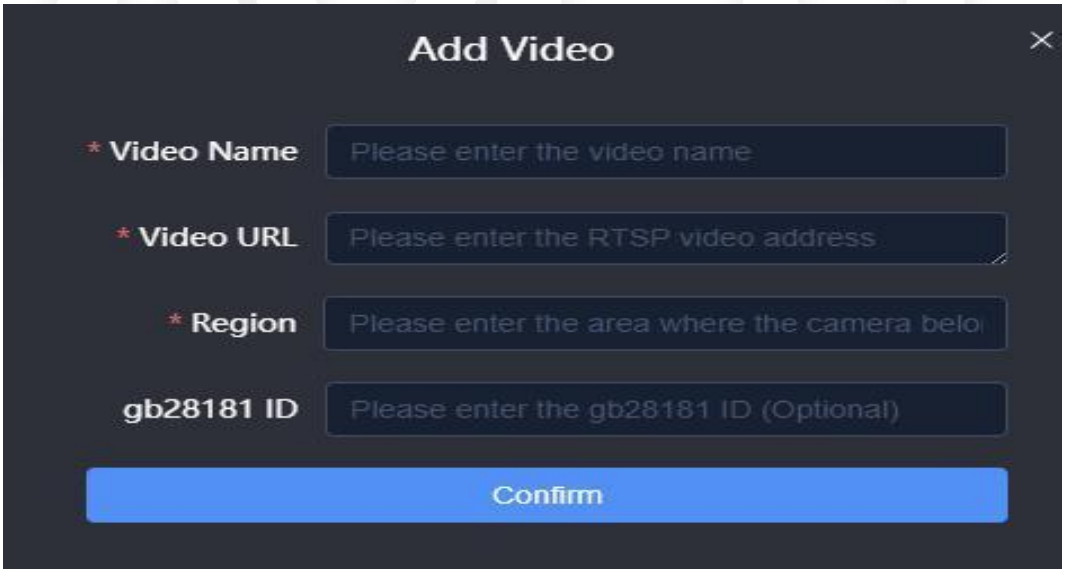


Figure1.3.3-2 Individual Video Adding

About Video URL,different manufacturer have different RTSP video format.

For example,the RTSP video formats for Hikvision, Dahua cameras, and NVRs are as follows,plz click——Attachment 1 : Hikvision and DaHua RTSP module to enter the Video URL

- **Add New Channel*(A brunch of video)***

Click **[Export Configuration],**will download a channel.xlsx document, please check the format below and fill one by one,"[]" means no algorithm be opened,keep it as dafult:

Figure1.3.3-3 Video Source Group Adding

Click **[Import Configuration]** to import the revised xlsx document, then refresh the menu to confirm whether the video sources have been added successfully.

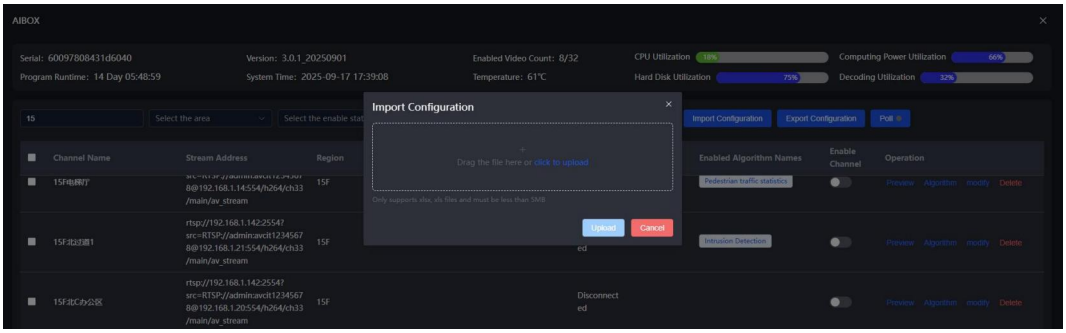


Figure1.3.3-4 Import Configuration

1.3.6.2 Algorithms Setting

See 1.3.4 Algorithms Setting ②Device-Channel Page Algorithm Setting

1.3.6.3 System Upgrade

The system offers an online upgrade feature to allow users to easily upgrade the latest version.

- In [Device] page, select the node to upgrade, click **[Upgrade device]**, and a prompt box will appear for importing the upgrade package.
- Update platform need two package:

①update package——for AI platform

②module package——for AI platform algorithm

- After importing, wait for the upgrade process to complete. Once finished, the system will automatically restart. Allow 1-2 minutes for the restart, then refresh the system interface to verify if the system version has been successfully upgraded.

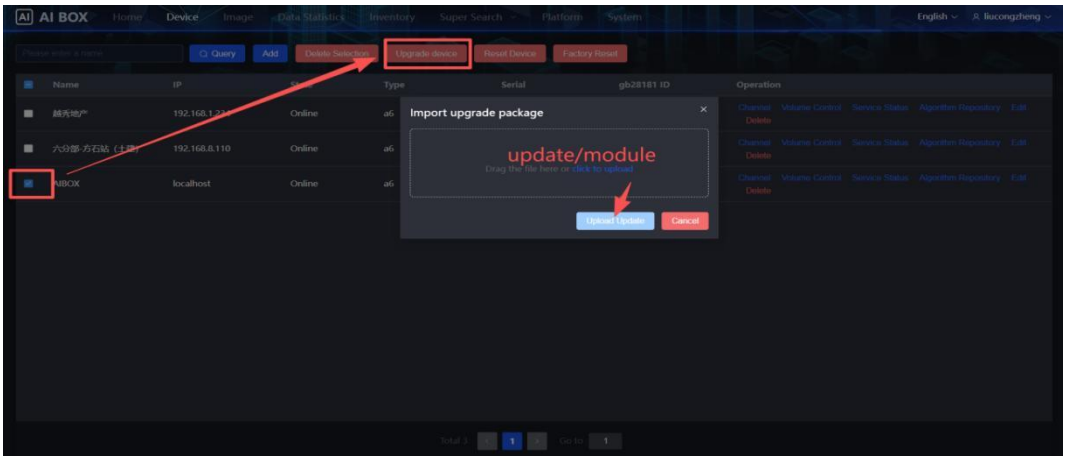


Figure1.3.6.3-1 How To Upgrade the system

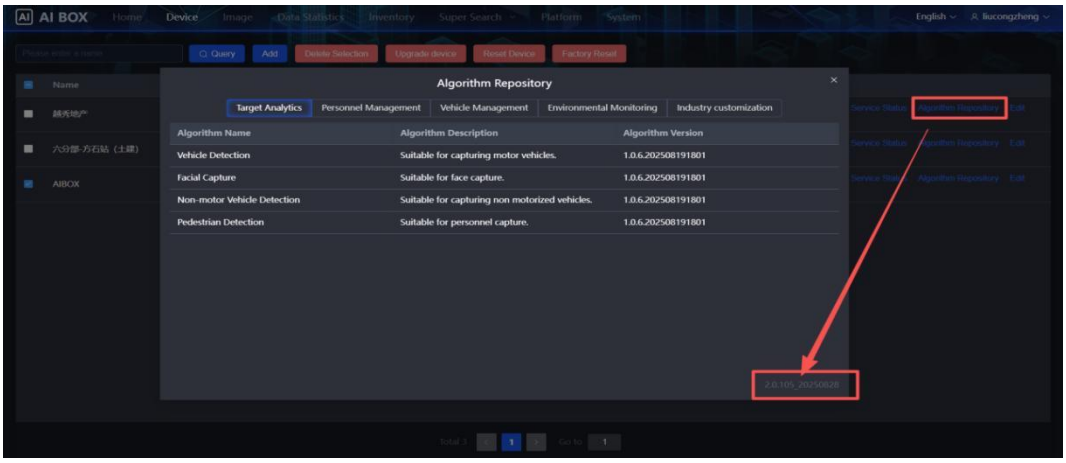


Figure1.3.6.3-2 Where to check update model package successfully

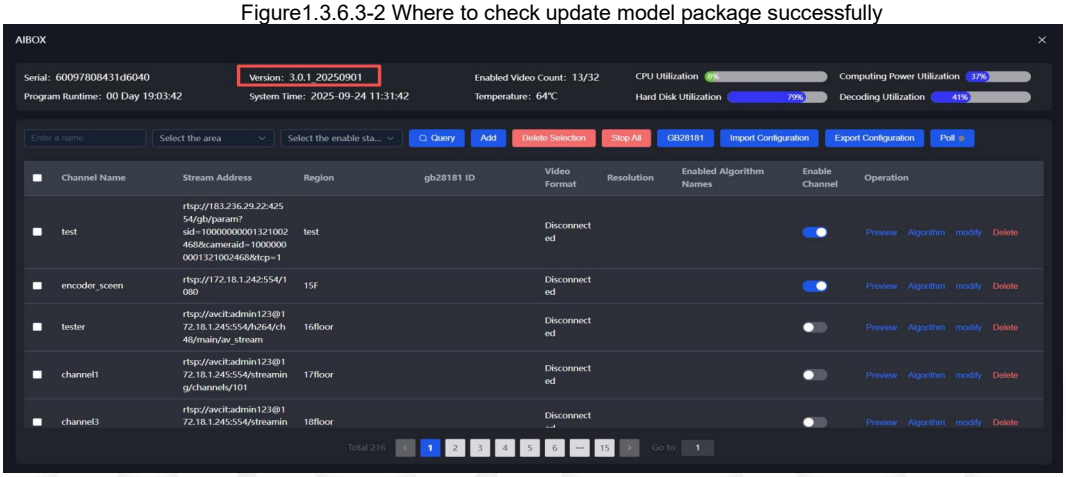


Figure1.3.6.3-2 Where to check update updatel package successfully

1.3.6.4 Reset Device

If need restart device while using AI platform,In [Device] page,select one node,click the top bar [Restart Device],it will restart Ai node automatically,need wait for a while to finish the restart.

Figure1.3.6.4 How To Restart Device

1.3.6.5 Factory Reset

If need reset AI node to default configuration ,In [Device] page,select one node,click the top bar [Factory Reset],it will reset Ai node automatically and clear the node's set information.

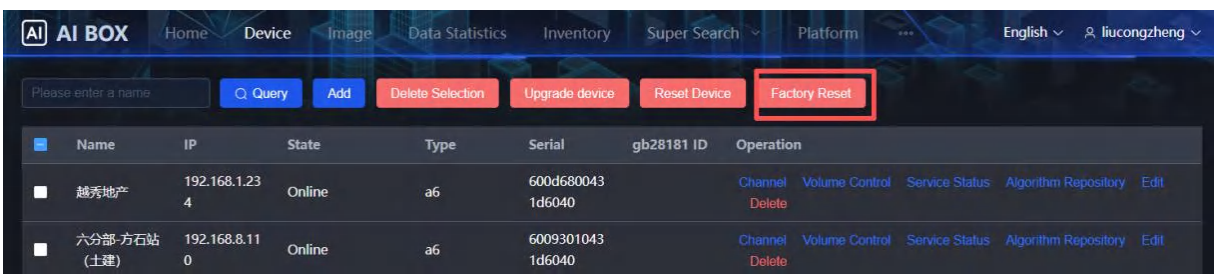


Figure1.3.6.5 How To Reset the AI node to default configuration

1.3.7 Image

The gallery management feature allows you to view the event information captured and uploaded by the current system. The event information includes the event type, alarm location, and alarm time.

1.3.7.1 Regular Search

In the gallery management, you can search for events using the following filters: [Non-human-machine view], [Behavior alarm], [Device list], and [Occurrence time period].

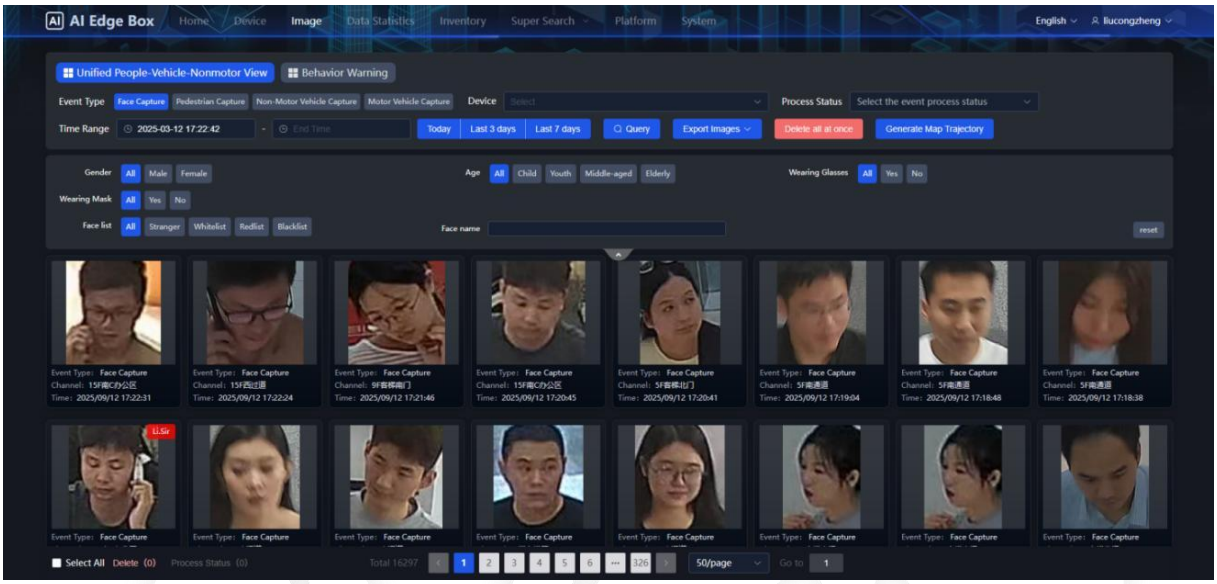


Figure1.3.6.1 Gallery Management Page

1.3.7.2 Attribute search

The system provides attribute retrieval functions for faces, bodies, and vehicles. First, select the desired image types. Once selected, the corresponding attribute retrieval selection will appear on the left, as shown below. You can then search for targets based on the attributes you wish to retrieve.

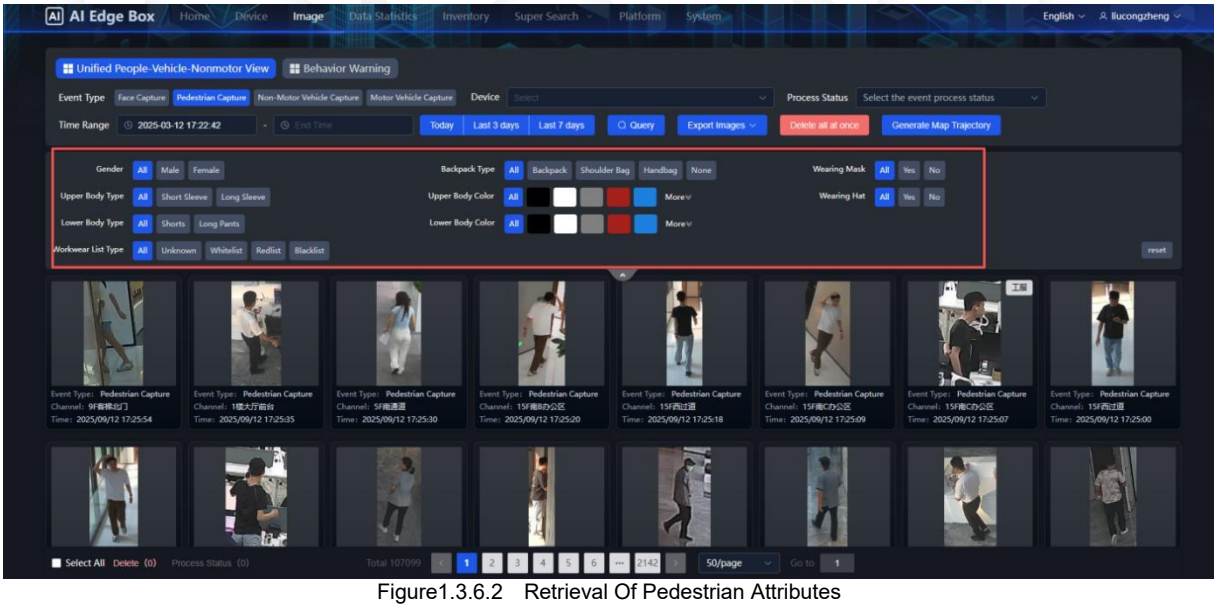


Figure1.3.6.2 Retrieval Of Pedestrian Attributes

1.3.7.3 Exporting Images

Image Export:

The system offers three image export formats:

- **Thumbnail:** A small picture displayed in the gallery.
- **Alarm Picture:** An image generated by the alarm event, including alarm information.

- **Original Picture:** The raw video image without annotation from the alarm event.

After selecting the image, move the mouse to the **[Export Image]** window and choose the desired image type for export. The image will be saved and downloaded as a compressed package. Once downloaded, simply extract the package to access the images.

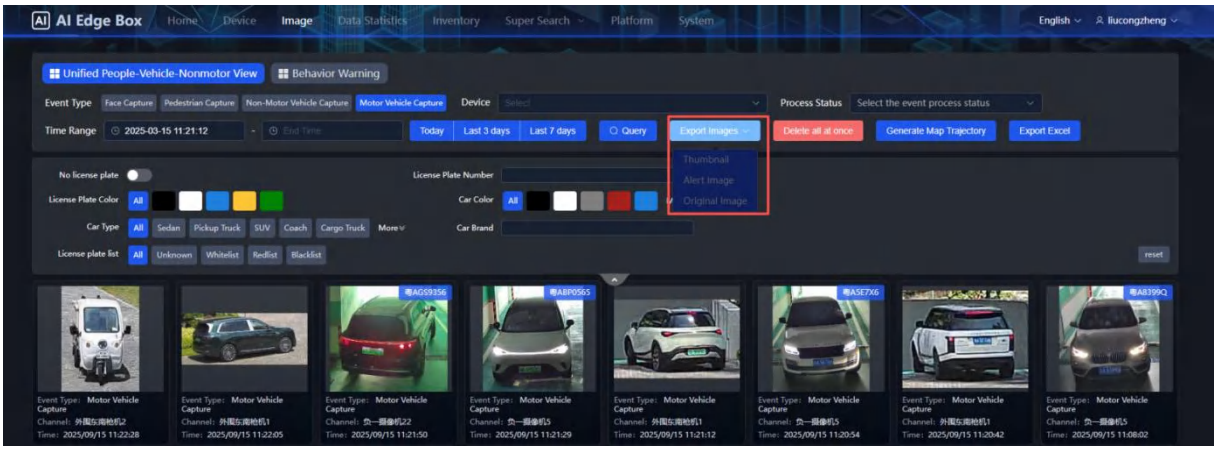


Figure1.3.6.3-1 Image Export Page

Figure1.3.6.3-1 Thumbnail Example

Figure1.3.6.3-2 Alarm/Original Picture Example

1.3.7.4 Generate Map Trajectory

See 1.4.0.3 Map Trajectory to know how to Generate Map Trajectory.

1.3.8 Data Statistics

Data Statistics let people to know how many Event have;Or know when have the highest event show up;Or read event list's lines details one by one.U can choose one algorithm to analyse precisely.

①**Home page brief statistic**

There is a frame named **[Warning Type Analysis]** In lower left side.Can see today's warning statistics.You can click the pie chart to know today's detection pictures.

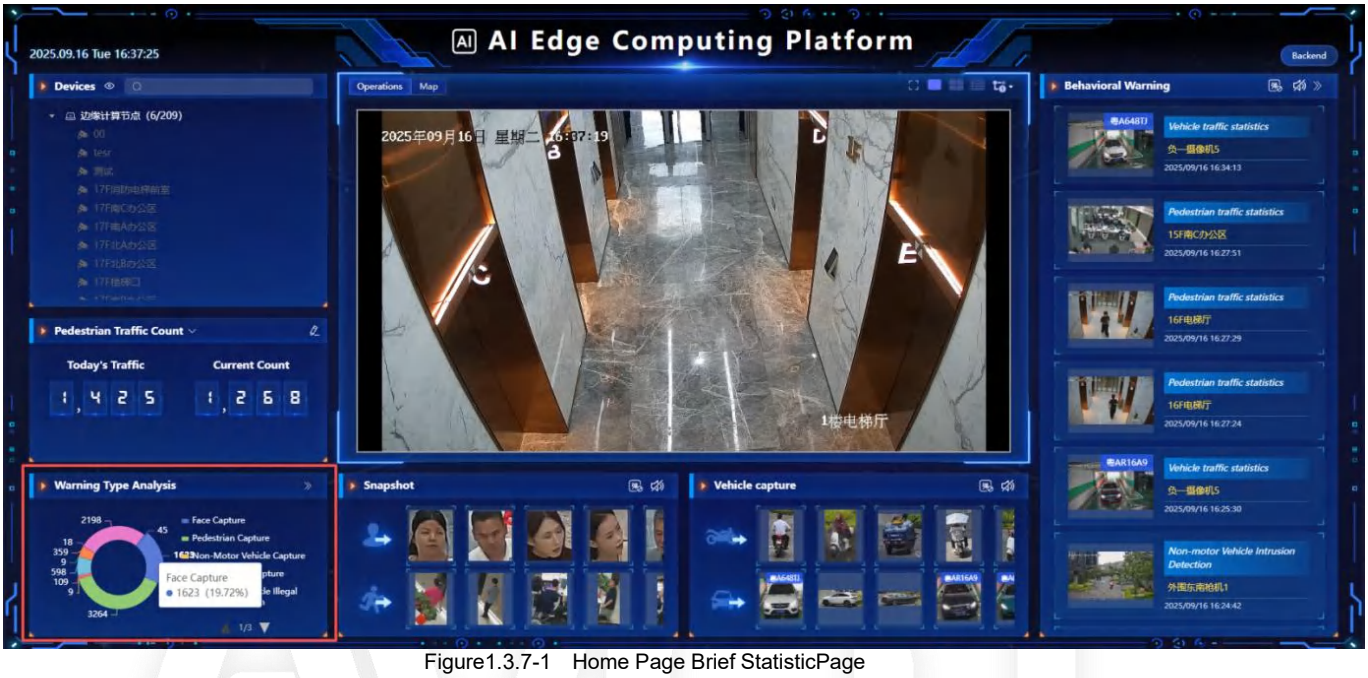


Figure1.3.7-1 Home Page Brief StatisticPage

Figure1.3.7-2 Click One Of Pie Chart Algorithm's Page

②**Top bar Data Statistics**

To **[Backend]**,click the name call **[Data Statistics]** in the top bar,you can see the interface,contain three side bar——Warning Statistic/Pedestrian Statistics/Vehicle Statistics

1.3.8.1 Warning Statistic

Warning Statistics interface summarize all camera with **[Algorithm]** enabled**.**

①**Precisely Select**

②**Event Trends**——tendency chart,to know when day/hour, all kinds of/just one algorithm have the highest number of detection

③**Event Proportion**——pie chart,summarize all kinds of/just one algorithm,today/7 days/30 days have,u can click one algorithm,it will show today's/these day's detection pictures and detail message about these pictures

④**Event List**——a list contain all detection,or precisely one algorithm's detection messages,u can roll mouse wheel to see detail messages,or click image to see detection picture one by one.

⑤**Export Excel**——export these detection messages into a excel to other further analysis,the excel format like Event list first line's properties.

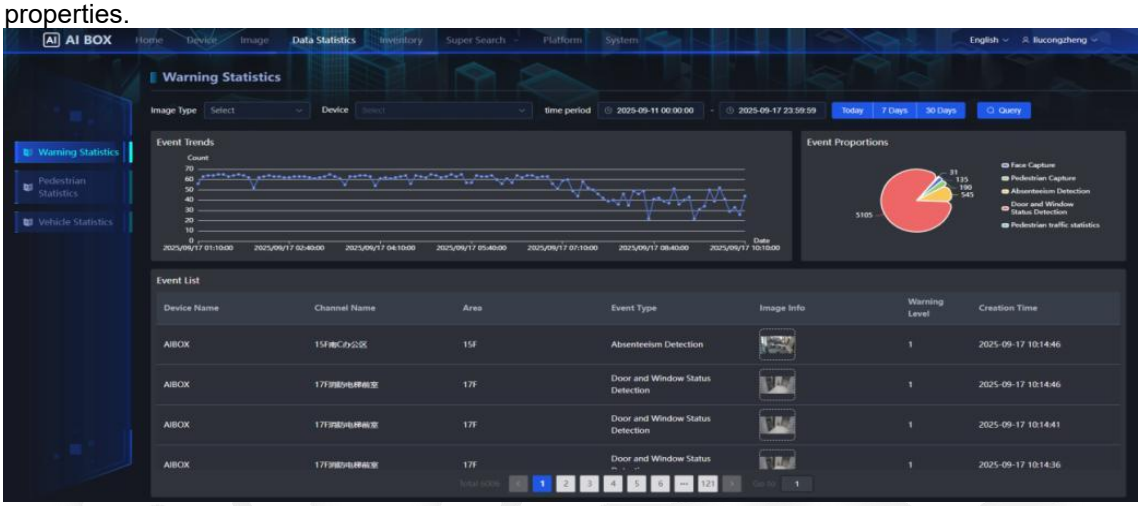


Figure1.3.7.1 Warning Statistic Page

1.3.8.2 Pedestrian Statistics

Pedestrian Statistics interface summarize all camera with **[Pedestrian traffice statistic algorithm]** enabled**.**

①**Precisely Select**

②**Pedestrian Traffic Trend**——see in and out trend line in different selection condition.

③**Pedestrian Traffic Proportion**——in and out proportion will show in colorful pie chart,u can click one color to see in/out detection pictures.

④**Pedestrian Traffic List**——a list contain all/one camera open **[Pedestrian traffice statistic algorithm]**,u can roll mouse wheel to see detail messages about in and out.

⑤**Export Excel**——export these detection messages into a excel to other further analysis,the excel format like Event list first line's properties.

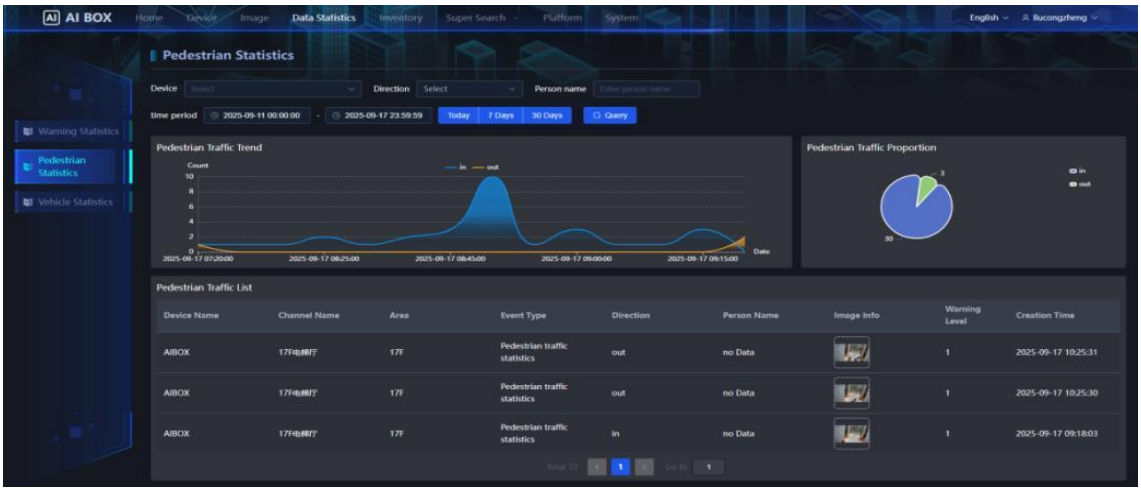


Figure1.3.7.2 Pedestrian Statistic Page

1.3.8.3 Vehicle Statistics

Vehicle Statistics interface summarizes all cameras with **[Vehicle traffice statistic algorithm]** enabled**.**

①**Precisely Select**

②**Vehicle Traffic Trend**——see in and out trend line in different selection condition.

③Vehicle **Traffic Proportion**——in and out proportion will show in colorful pie chart,u can click one color to see in/out detection pictures.

④Vehicle **Traffic List**——a list contain all/one camera open **[Vehicle traffice statistic algorithm]**,u can roll mouse wheel to see detail messages about in and out.

⑤**Export Excel**——export these detection messages into a excel to other further analysis,the excel format like Event list first line's properties.

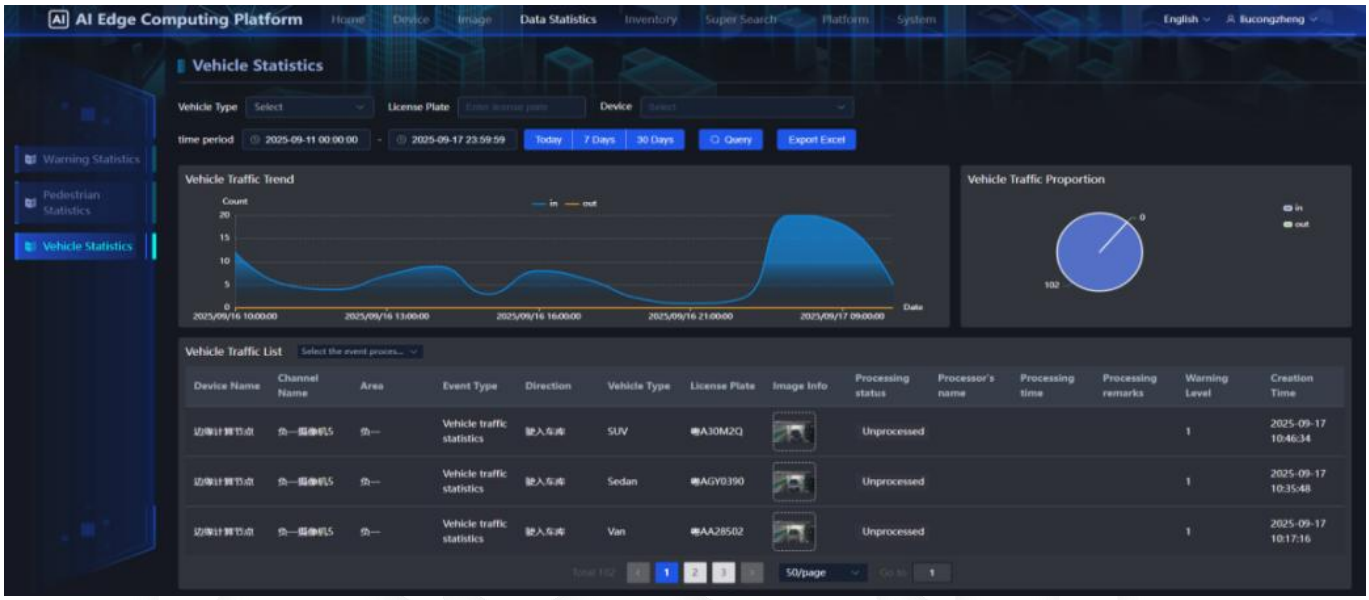


Figure1.3.7.3 Vehicle Statistic Page

1.3.9 Inventory

- In Inventory interface,u **can upload face image、Work-wear image、Car License Plate number here and set its category(white/red/black list)**.It will let algorithm compare camera's face/work-wear/car license number with Inventory contents.
- If **similarity up to** our **algorithm default percentage**(can change the percentage in algorithm setting),it will **regard** this person/workwear/car license as the person/workwear/car license **u put into the Inventory**.

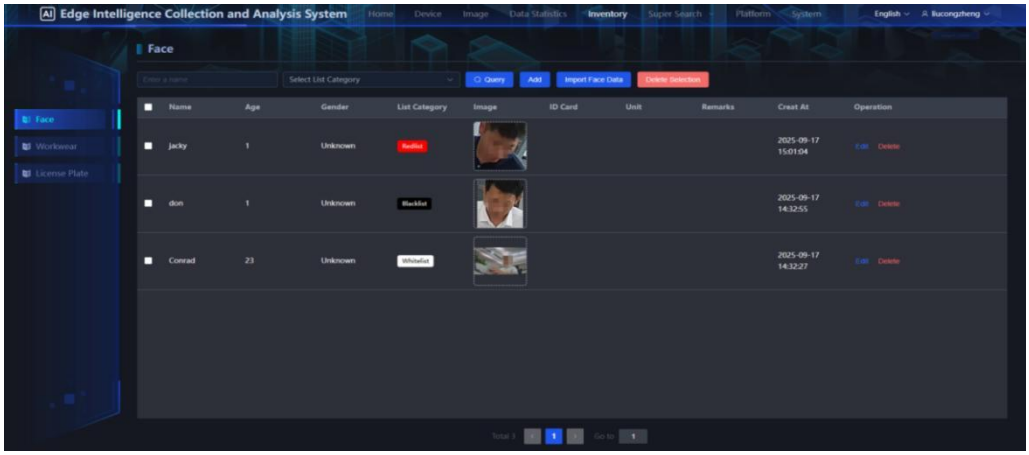


Figure1.3.8-1 Inventory Page

the phenomenon is——top right side **will have its name with black/white/red frame :**

①**Home page**——Snapshot、Behavioral Warning

Figure1.3.8-2 Inventory Picture Affect Detection alarm

②**top bar**——Image

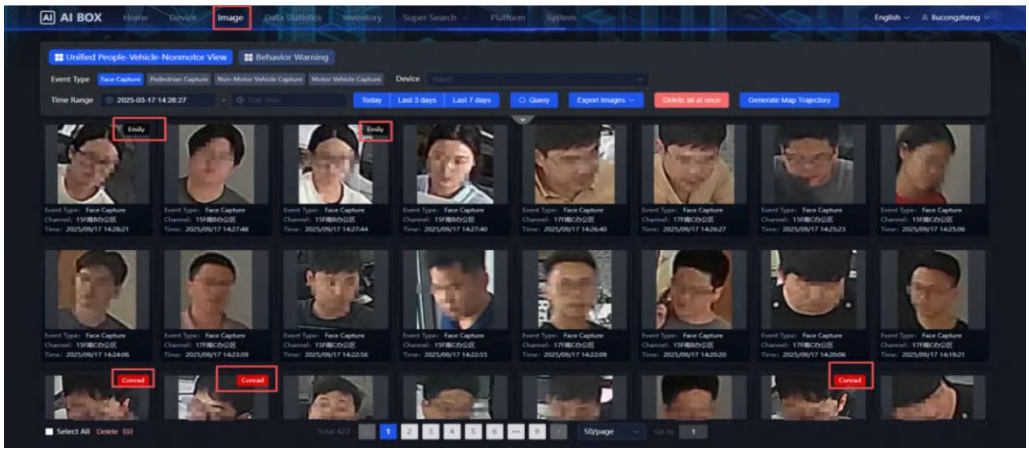


Figure1.3.8-2 Inventory Picture Affect Image Page

1.3.9.1 Face

①The **face image must clear,or not so different than he/she now looks like**

②the reason detect as stranger about——face picture、camera angle、algorithm parameter **[Comparison similarity]** too high、camera resolution、etc.

Figure1.3.8.1-1 Fail Detect As Inventory Person Key Detail Parameter Example

If the person similarity is too low,can turn down the algorithm parameter——**Comparison similarity.**

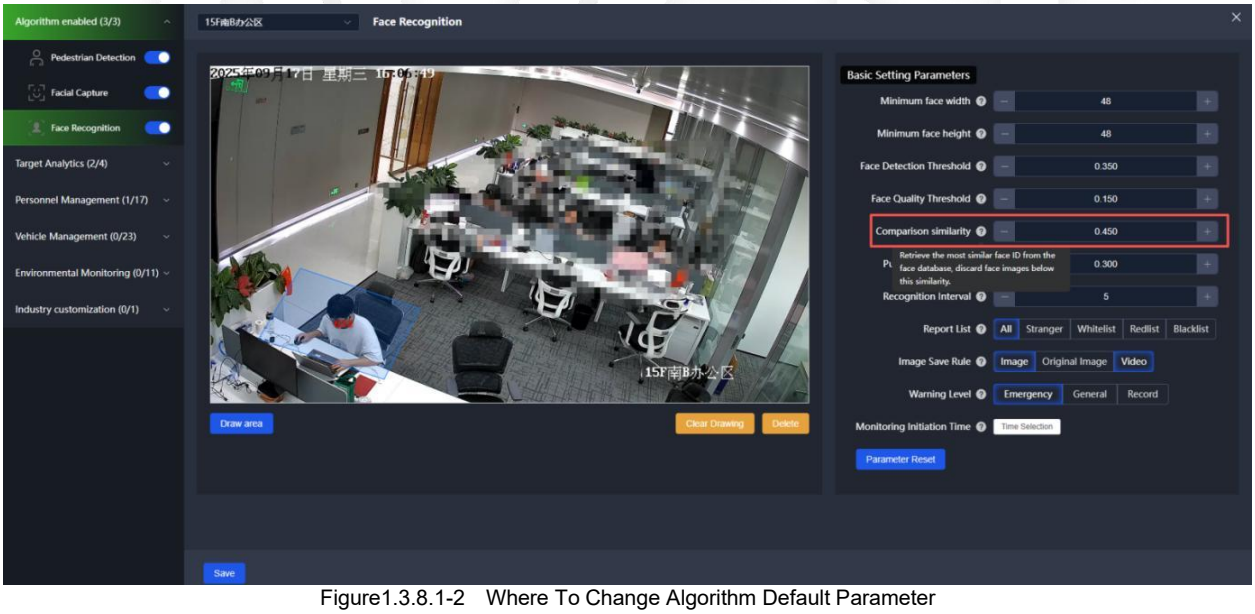


Figure1.3.8.1-2 Where To Change Algorithm Default Parameter

1.3.9.2 Workwear

①Work-ware can be **helmet、clothes or something dress in human body**,just take like clothes picture into the Inventory

②which algorithm will quote——**Work Uniform Recognition、Pedestrian Detection**

③will limit about——work-wear picture、camera angle、algorithm parameter **[Work Uniform Comparison similarity]** too high、camera resolution、etc.

Figure1.3.8.2-1 Work Uniform Recognition Successful Regard Clothes Picture as Uniform Example

If algorithm Similarity still too low,go to algorithm setting page turn down **[Work Uniform Comparison similarity]** or change picture.

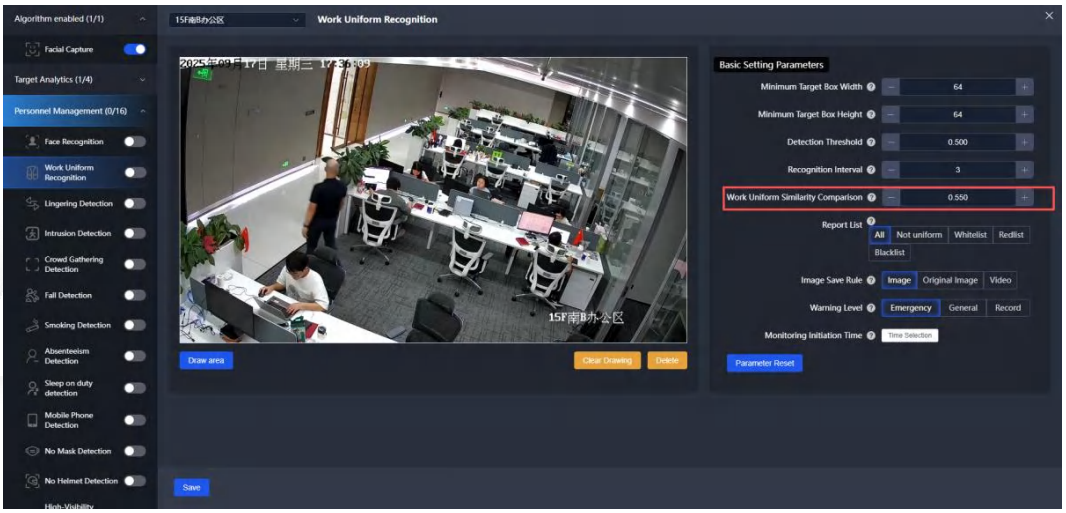


Figure1.3.8.2-2 Where To Change Algorithm Default Parameter

1.3.9.3 License Plate

①In License Plate Interface,click [Add] to input license plate and limit its category.

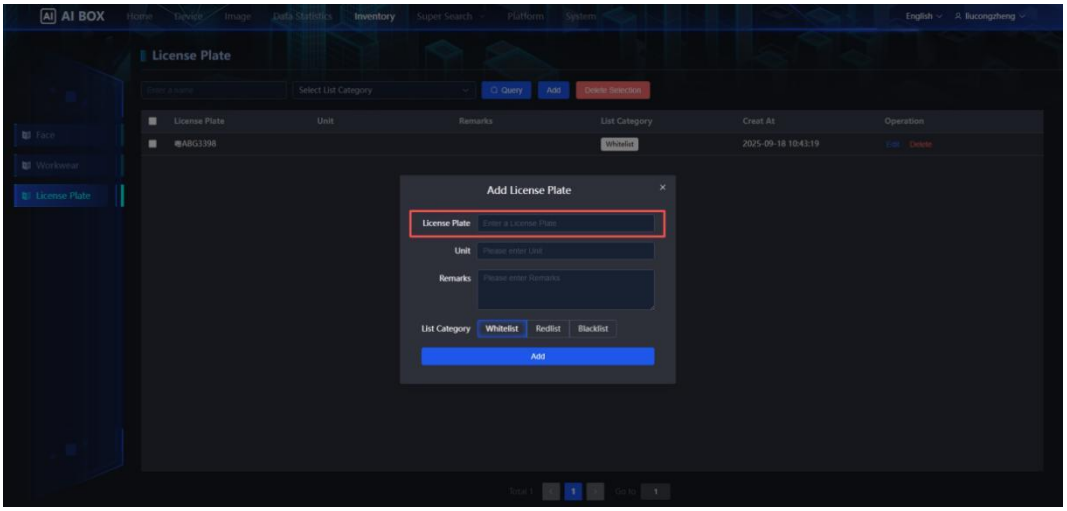


Figure1.3.8.3-1 How To Add License Plate

②which algorithm will quote——Vehicle Detection、License Plate Recognition、etc....

③will limited about——camera resolution、camera angle、etc.

Figure1.3.8.3-1 How To Add License Plate

1.4.0 Super Search

1.4.0.1 Face Search

Allows users to upload a face image or select an image from an existing image library to quickly search for similar face records in the system's face database.Click **[Super Search]-[Face Search]** at the top.

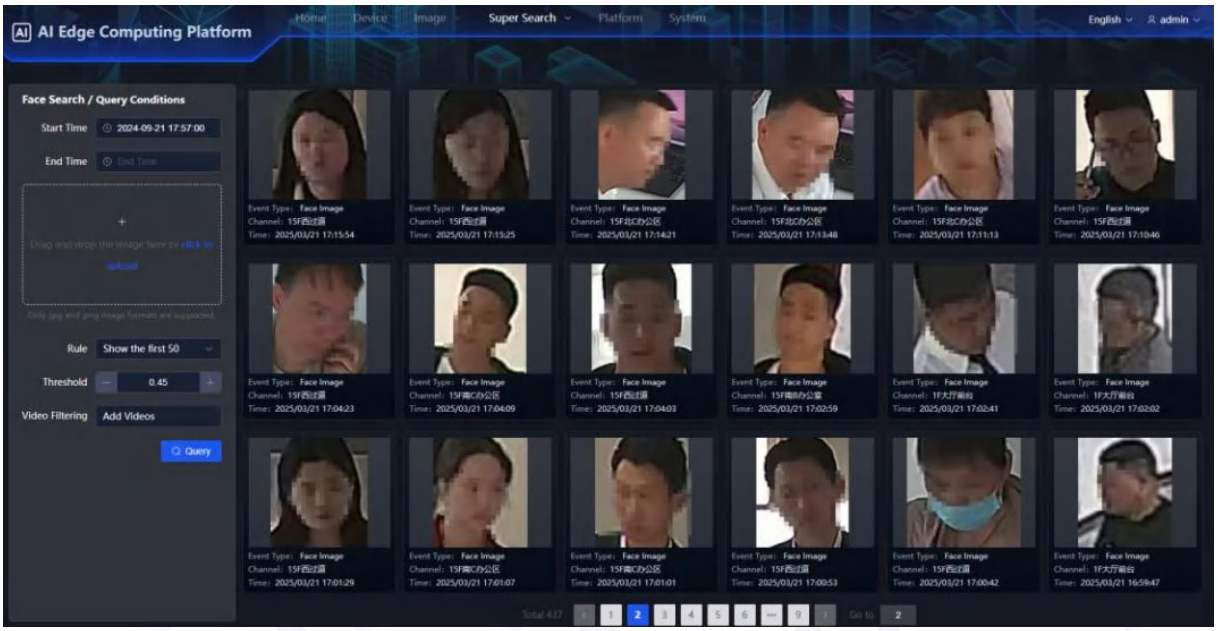


Figure1.3.7.1-1 Face Search Page

❖ **Method 1: Upload Face Image**

Click the **[click to upload]** button on the interface, select a clear image containing the target face (supports common formats such as JPEG, PNG, etc.), and the system will automatically process the image and extract the face features.

❖ **Method 2: Drag Image from Image Library**

If the target face image is already stored in the system's image library, you can directly select it from the image library list on the left.Drag the selected image into the search area or click the "Query" button to complete the operation.

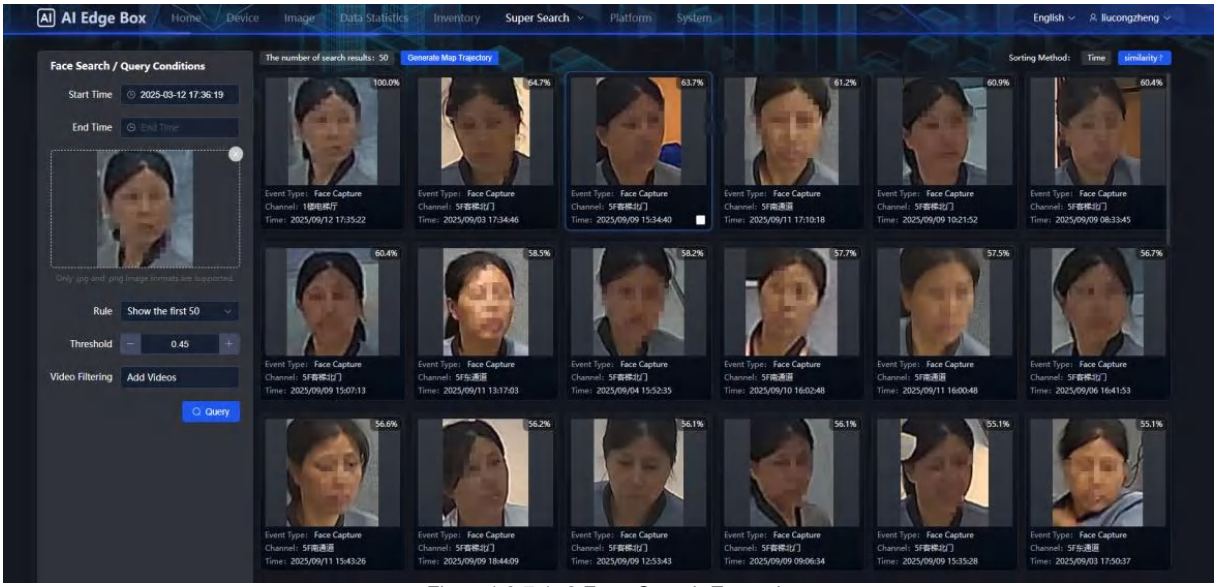


Figure1.3.7.1 -2 Face Search Example

The system will display the matching results on the right side of the interface. This will include the similarity score, corresponding face information, and related data. Users can adjust the filter conditions for the search as needed, such as modifying the search threshold, selecting video channels, and other criteria.

1.4.0.2 Person Search

Allow people upload pedestrian's pic or select images from existing image database,quickly search same person record from system pedestrian database.

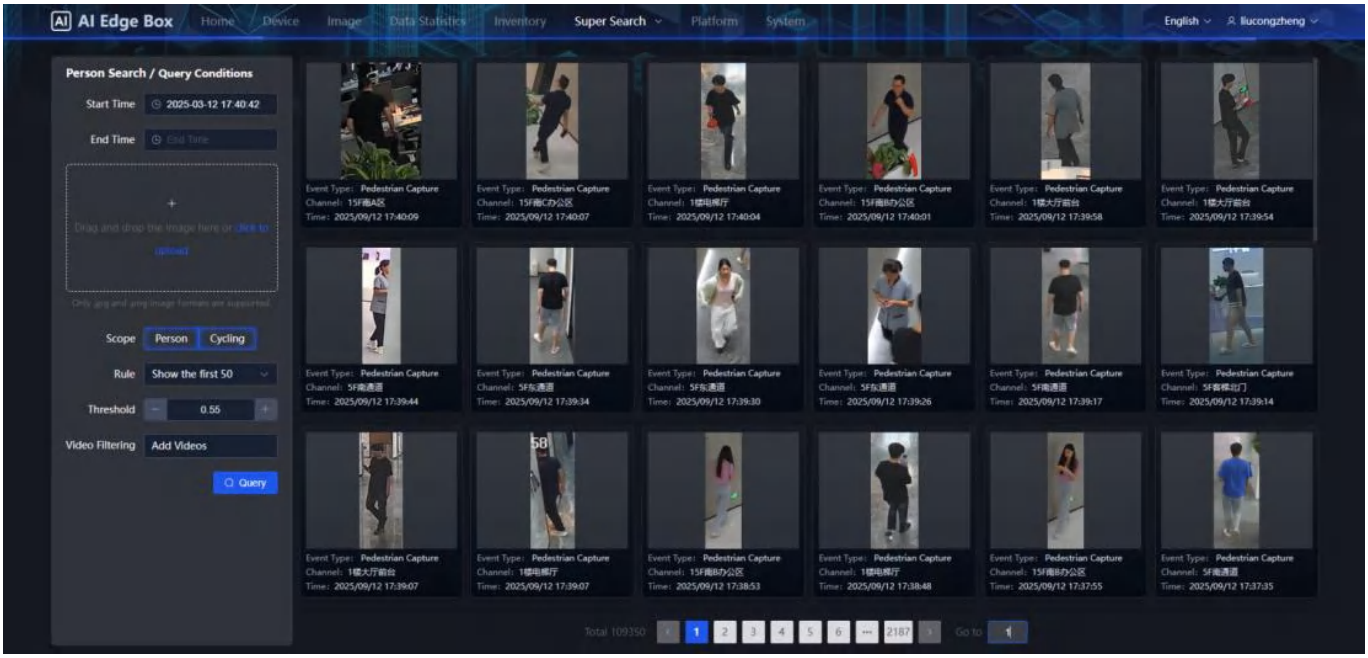


Figure1.3.7.2-1 Person Search Page

❖ **Method 1:Upload pedestrian's pic**

Click the **[click to upload]** button on the page, select a clear image containing the target human body (supports common formats such as JPEG, PNG, etc.), and the system will automatically process the image and extract the human features.

❖ **Method 2:Drag picture picture database have,to the upload frame**

If target human pic already storage in system's pic databases,u can directly choose from pic databases form from page right side.And drag ur target pic to the check area,or click **[query]** to finish the operation.

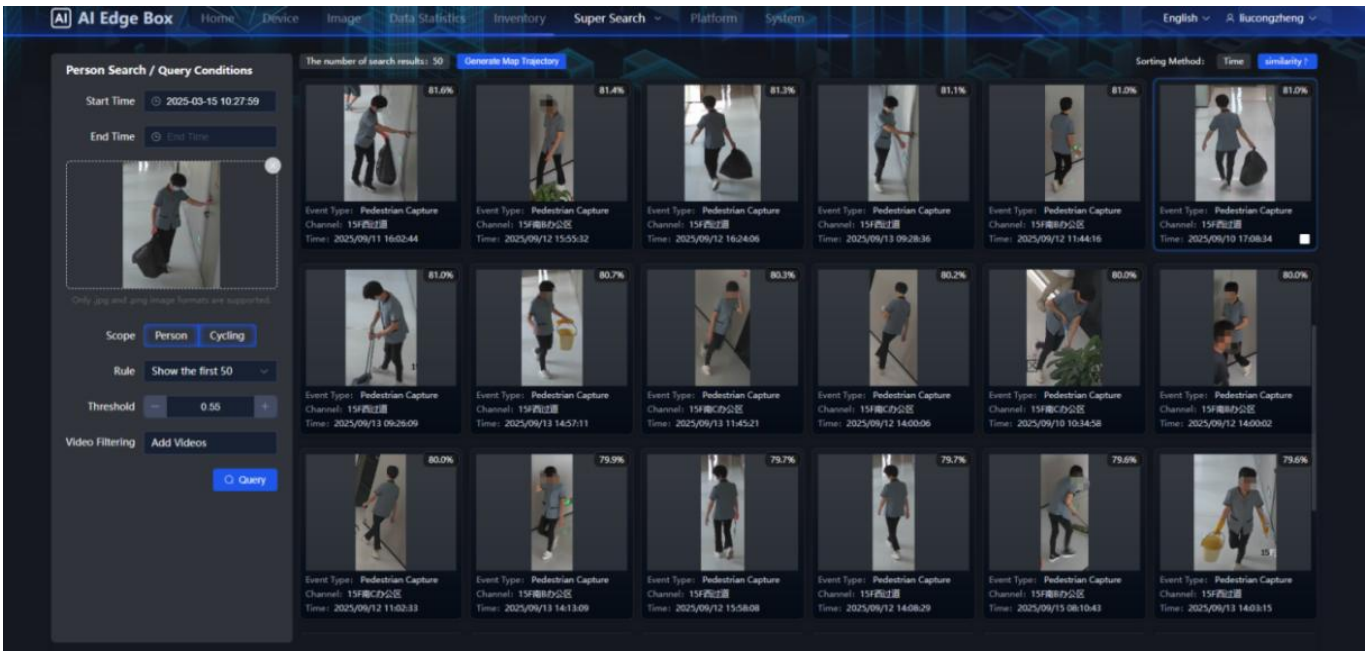


Figure1.3.7.2 -2 Person Search Example

1.4.0.3 Map Trajectory

When Face/Person Search is finished,u can **choose person's picture or face picture***(lower right have checkbox)* **to [Generate Map Trajectory]**,u can see the point where people have appeared on the map,and generate trajectory.

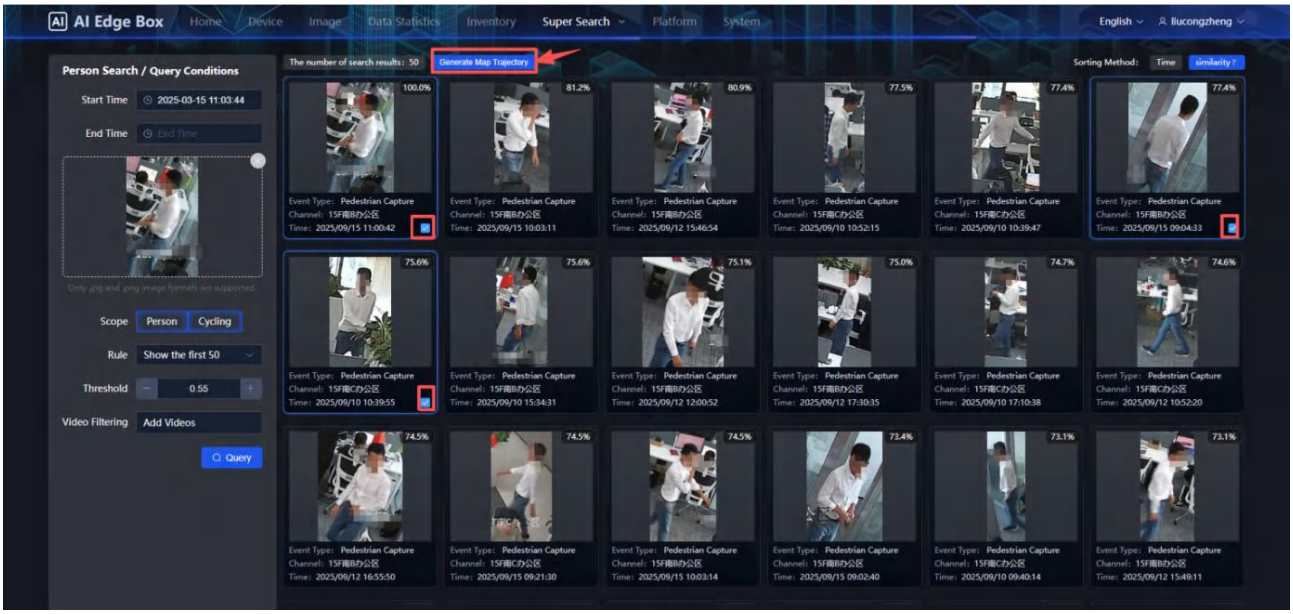


Figure1.3.7.3-1 How To Generate Map Trajectory

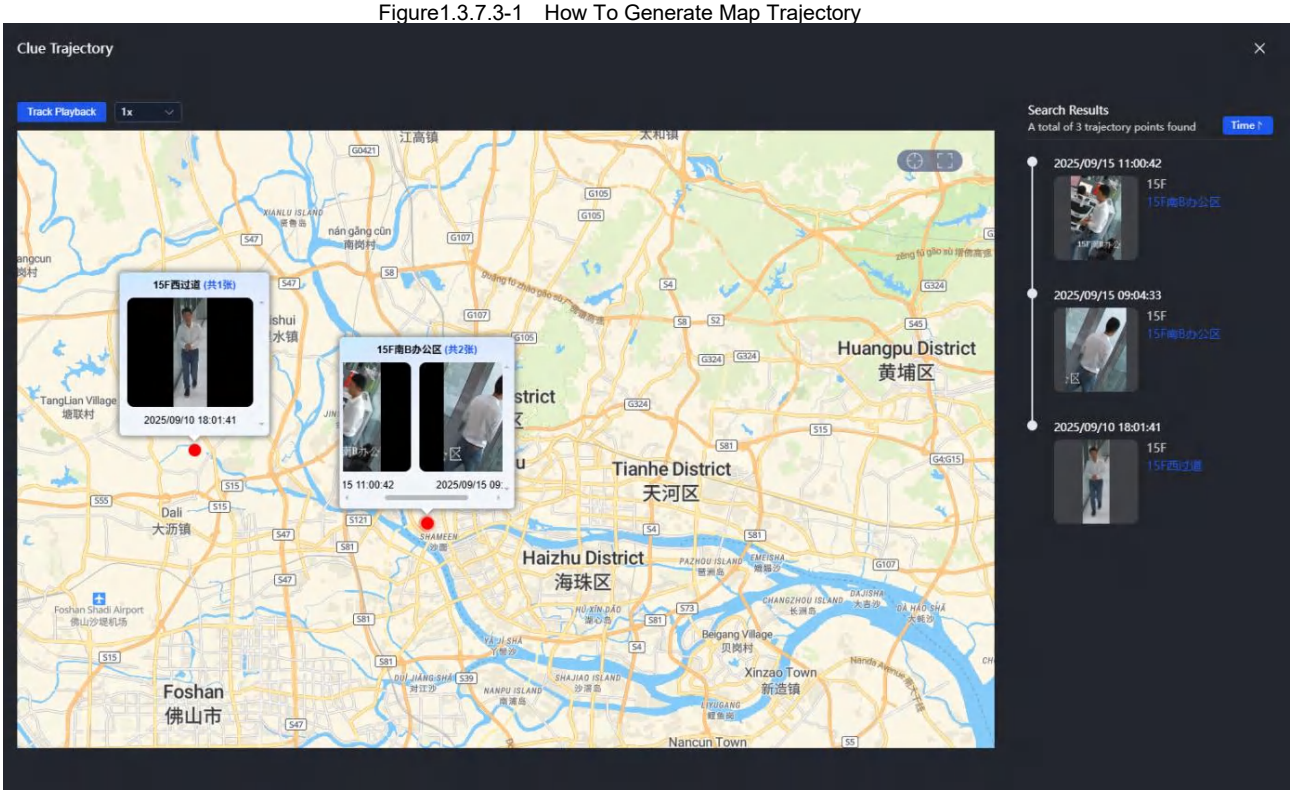


Figure1.3.7.3-2 Map Trajectory Page

1.4.1 Platform

1.4.1.1 Cloud Platform

AI box support one box to manager other AI box，let maintain and operation engineer to manage and configuration conveniently.

- **How to use Cloud Platform function?**

Example:172.18.1.241 is upper-level node,172.18.1.247 is under managed

①make sure which device is upper-level node,which is under managed

②**In be managed node**:

(1)click the top bar named **[Platform]**,the side bar named **“Cloud Platform”**

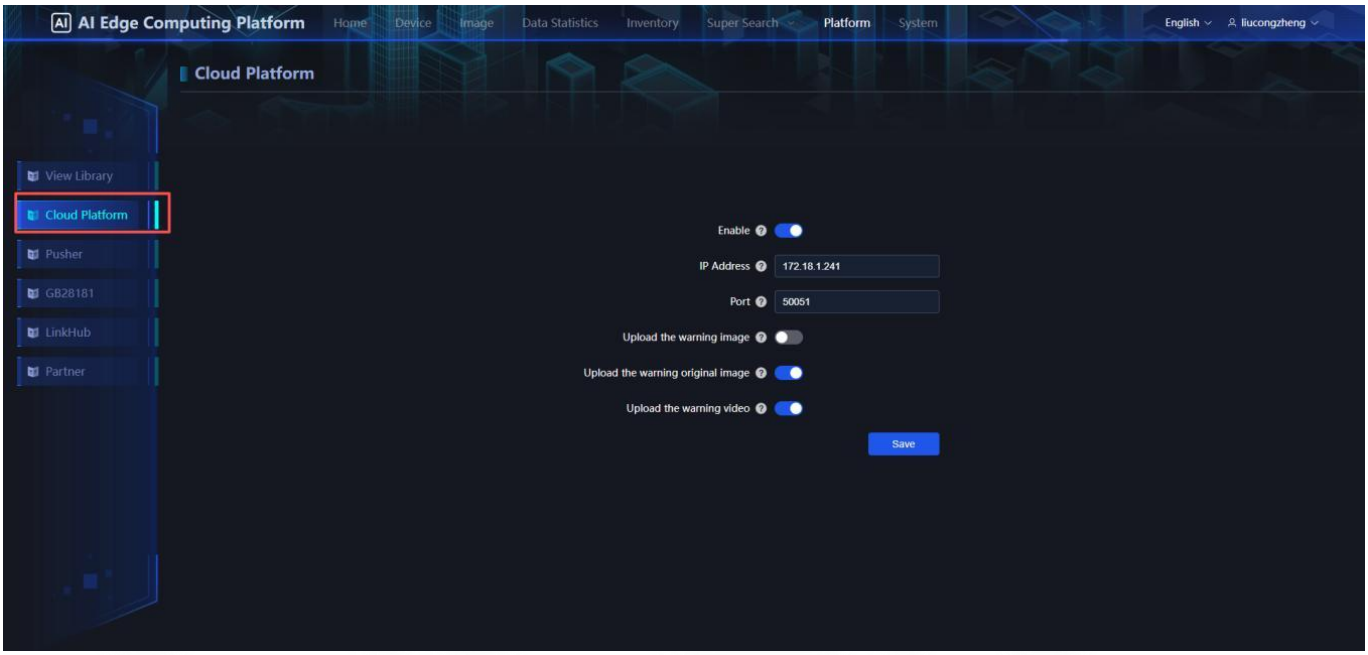


Figure1.4.0.1-1 Cloud Platform Page

(2)Enter upper-level node’s IP to “**IP Address”** input box;

Ⅰ.Turn the “Enable**”** button to “ON” status

Ⅱ**.**If want the upper-level node accept be managed node’s warning image/original image/warning video,open “Upload the warning Image”/”Upload the warning original Image”/Upload the warning video” button to “ON” in real environment.

③**In upper-level node**:

Ⅰ.click the top bar **[Device]**,click “**Add”** in Device page.

Ⅱ.In Add Device pop-up:

- ”IP” is be managed node’s network address——172.18.1.247
- ”Name” can input randomly
- ”Serial” is in be managed node platform——[Device]-”Channel” page.The top left side which named “Serial”,copy the number after “:” and paste into upper-level node’s “Serial” input box then “Confirm”.
- Refresh the page,and look the “Status” from “Offline” to “Online”.

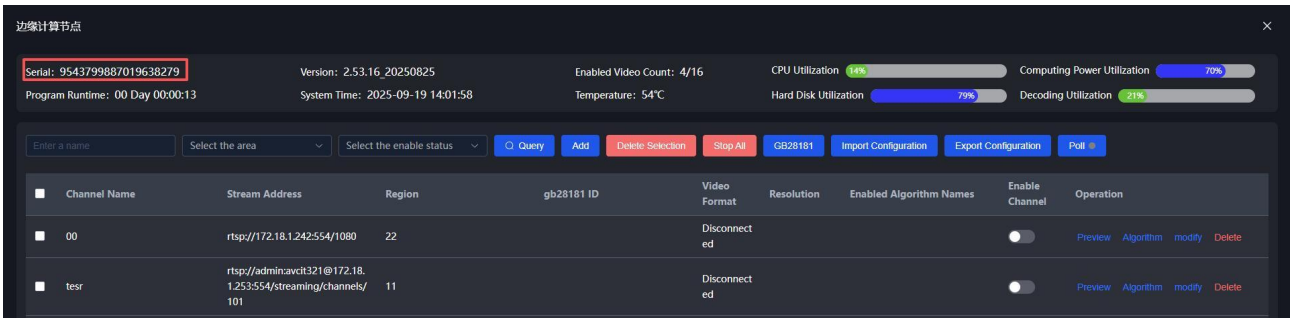


Figure1.4.0.1-2 How To Find Be Managed Node's Serial

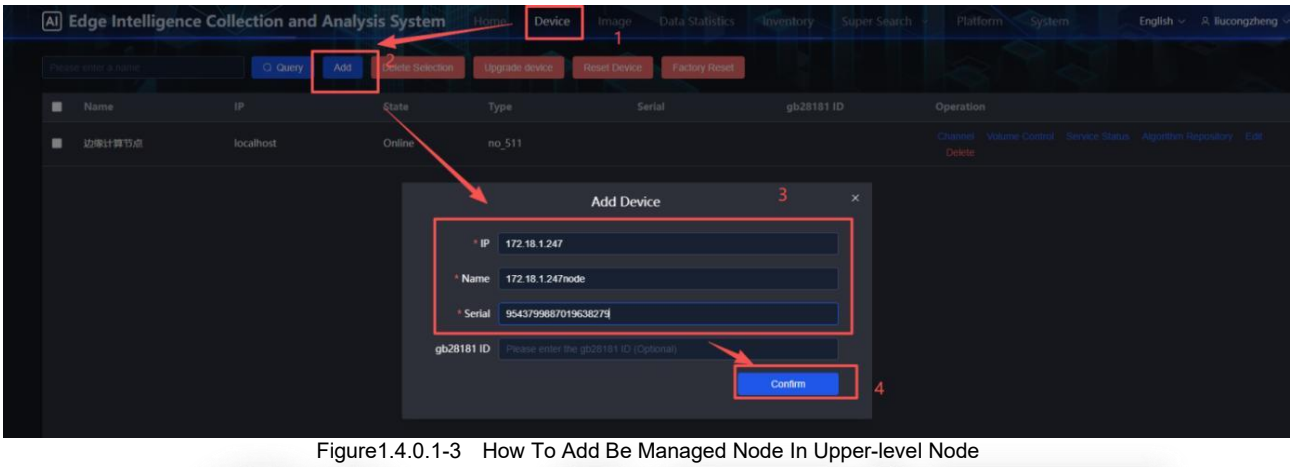


Figure1.4.0.1-3 How To Add Be Managed Node In Upper-level Node

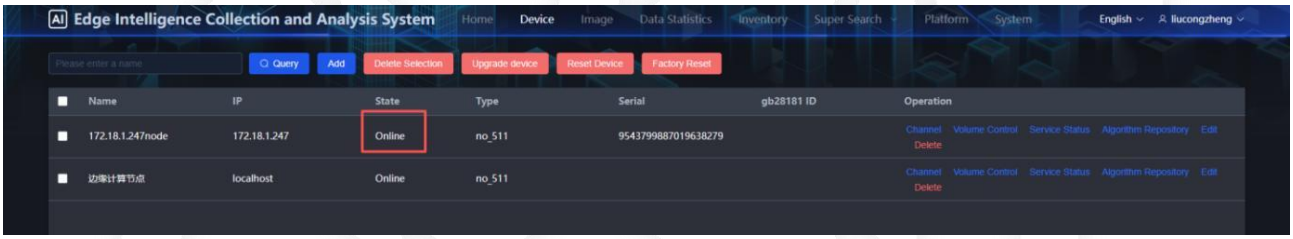


Figure1.4.0.1-4 How To Add Be Managed Node In Upper-level Node

1.4.1.2 Pusher

It will let system generate alarm picture through HTTP/post way to push other platform in json format.Click top bar [Platform],and side bar "Pusher" into page.

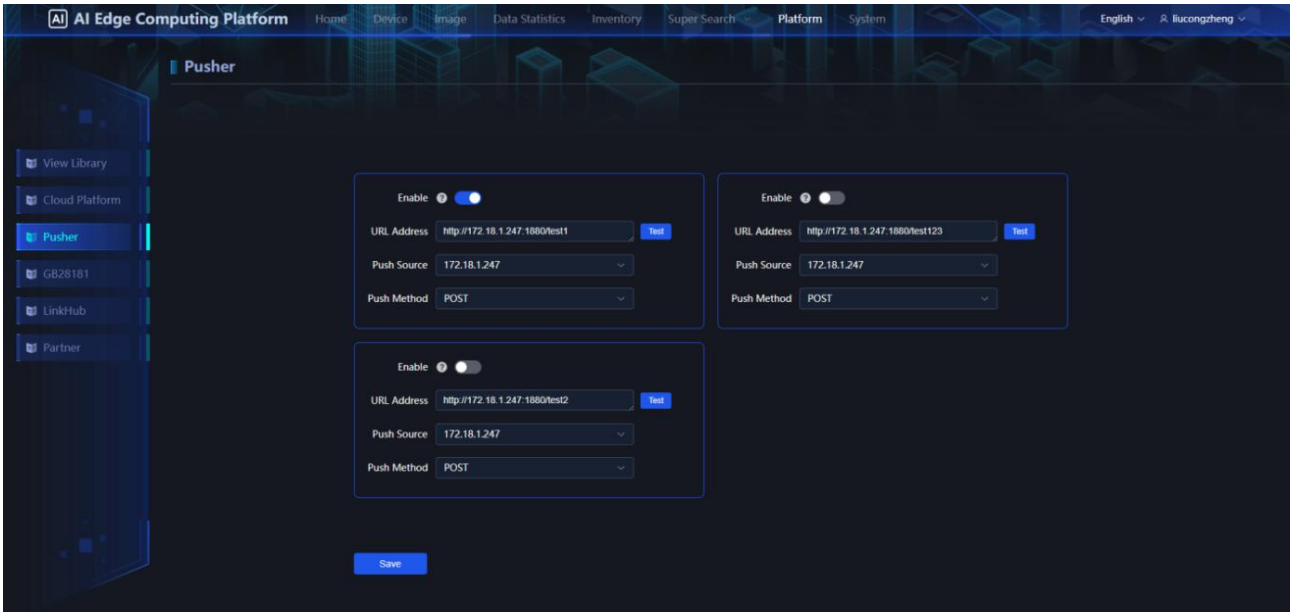


Figure1.4.0.2-1 Pusher Page

”URL Address”——the address defined by recipient

”Push Source” ——choose which ip address of the AI box be selected for pushing other platform

”Push Method”——post or get function push to other platform

“Test”——test whether this interface is existing and network is working

“Enable”——alarm message will sent to this URL address.Recipient should base these field to analyse picture alarm messages.

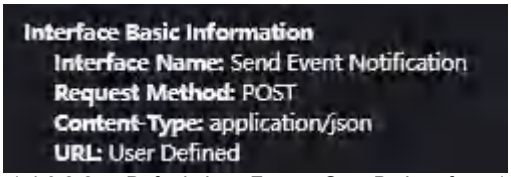


Figure1.4.0.2-2 Default Json Format Sent By Interface-1

Figure1.4.0.2-2 Default Json Format Sent By Interface-2

Figure1.4.0.2-2 Default Json format Sent By Interface-3

1.4.1.3 Link Hub

The [Link Hub] enables seamless integration with hardware, API, and online services through a graphical workflow editor. Users can build data flows by dragging, dropping, and linking nodes—no coding required. It supports various node types, including input (HTTP input, MQTT subscription), processing (function, transformation), and output (HTTP response, MQTT publishing), covering diverse applications.

Click the top bar [Platform]-"Link Hub"——Open "Enable" button——"Jump"——enter password "**AVCIT@admin123**" to Node-red page.

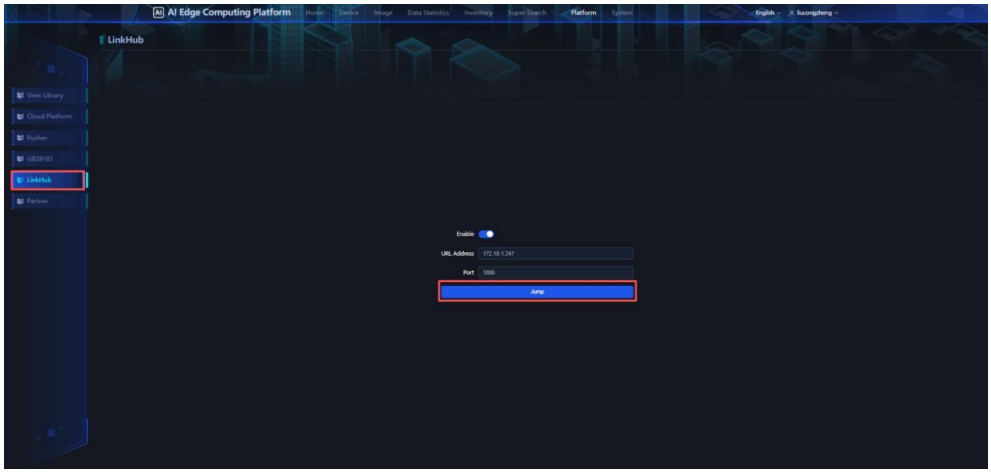


Figure1.4.0.3-1 LinkHub Page

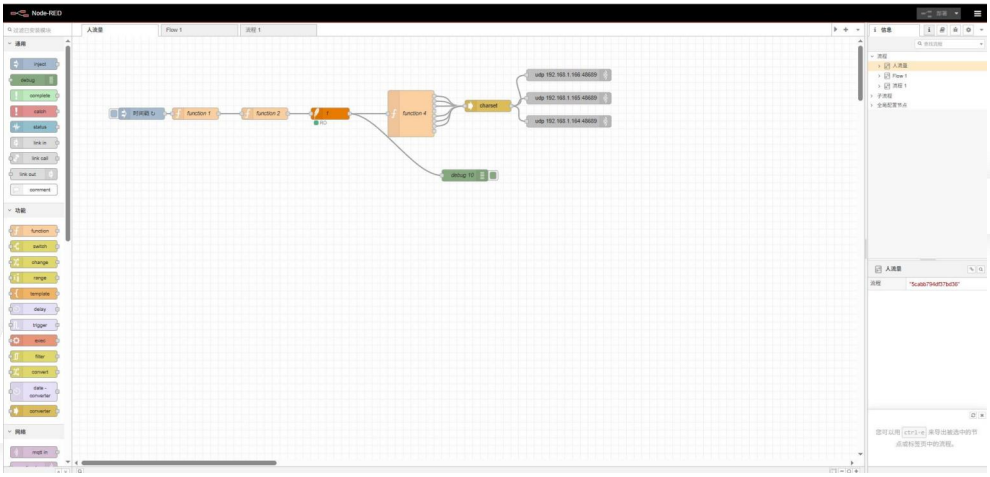


Figure1.4.0.3-2 Node-Red Page

Note: For Intelligent Hub integration, please contact our pre-sales or after-sales support.

1.4.1.4 Partner

This module enables third parties to manage our AI platform on their own platforms, but it requires the corresponding parameters. The attachment(Attachment 2：API Interface Document) has been provided; please download and review it yourself.

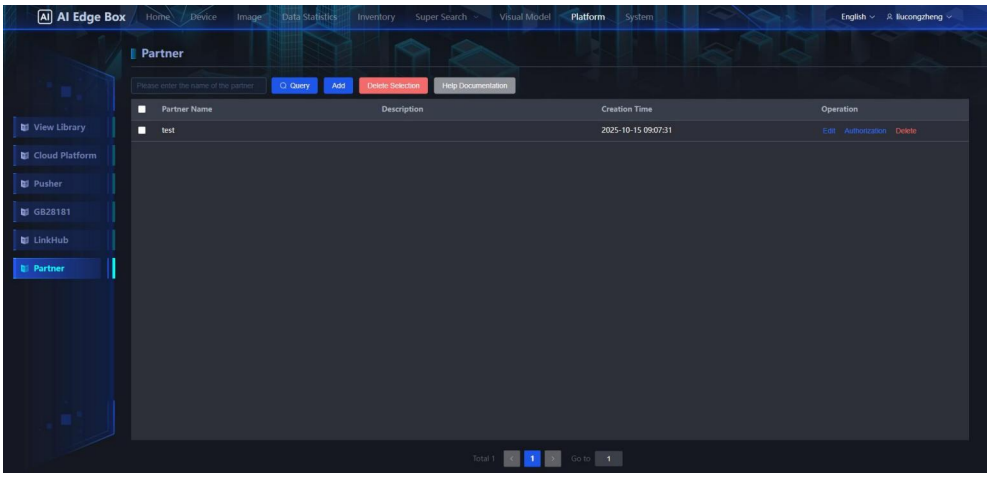


Figure1.4.0.4 Partner Page

1.4.2 System

1.4.2.1 User

When first login,the default user just admin.If u **want to add user**,Click the top bar [System],and click the side bar [User].

Can choose two level when click **[Add user]** button:

①**Administrator**——have [System] page and have all camera device permission(image/view/edit)

②**Regular User**——don't have [System] page and should be allocated permission by Administrator(image/view/edit) in "Group" page, then can see the specific camera information.

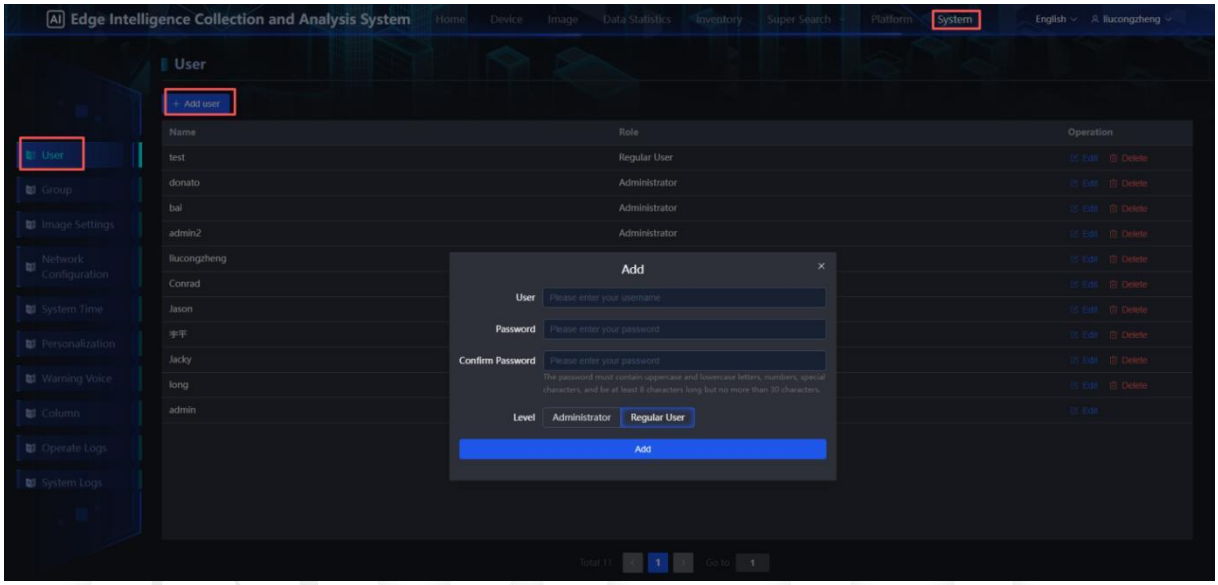


Figure1.4.1.1-1 User Page

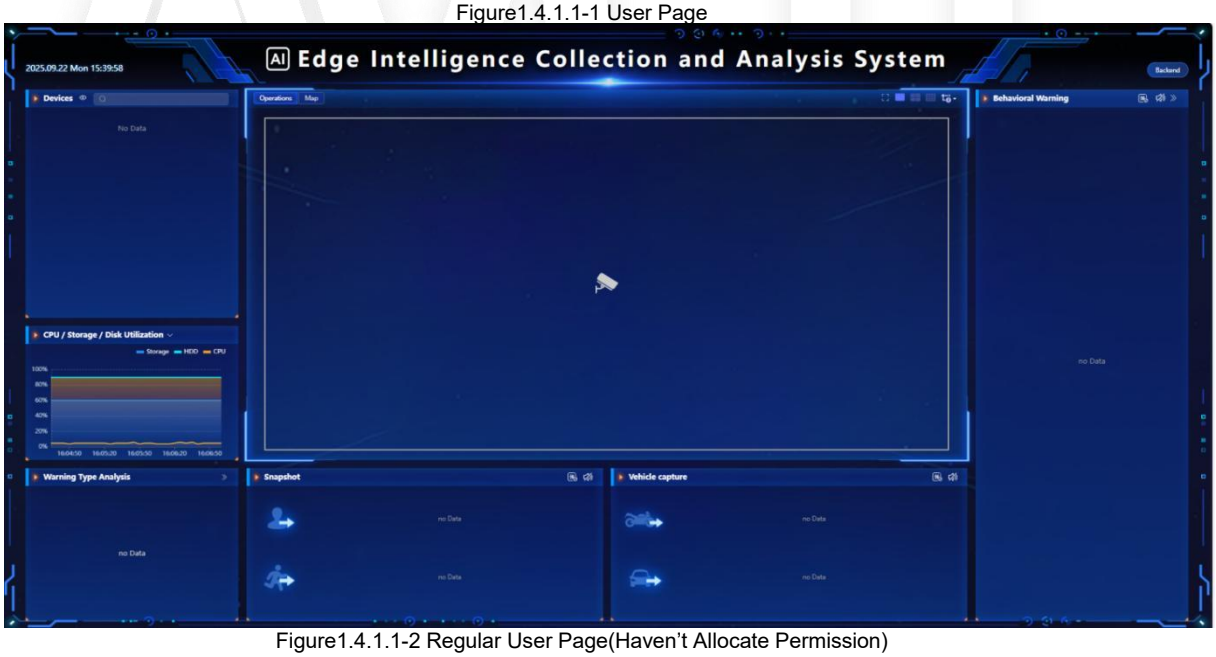


Figure1.4.1.1-2 Regular User Page(Haven't Allocate Permission)

1.4.2.2 Group

Group page is to **limit Regular user about AI node camera's permission(image/view/edit)**.

Click the top bar [System],and the side bar [Group],click "Add Group" to create a group,then click "Edit" to allocate permission.

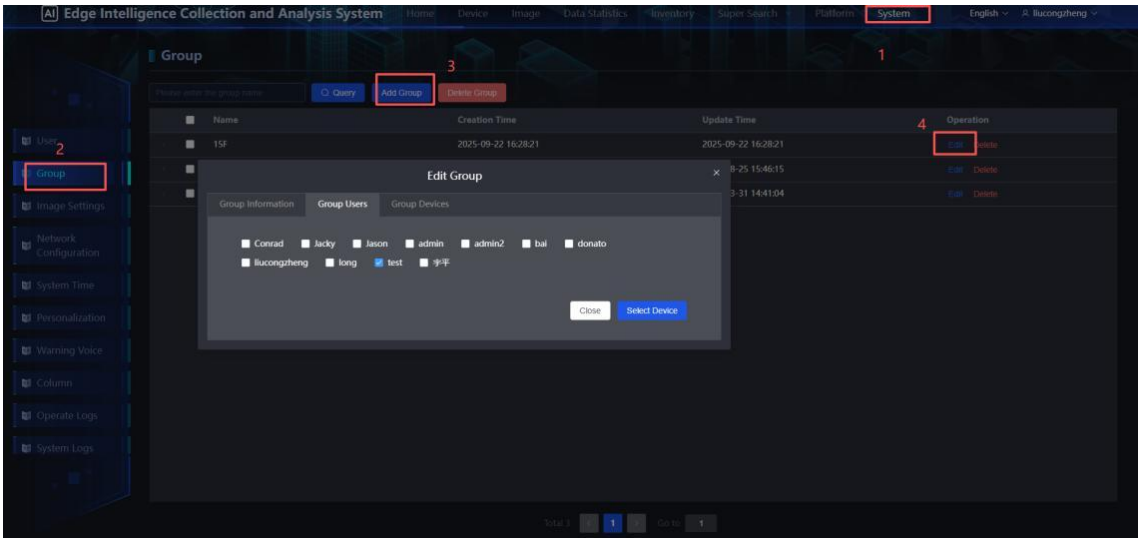


Figure1.4.1.2-1 Group Page

Figure1.4.1.2-2 How To Allocate Permission(Add 15th Floor Camera)

Figure1.4.1.2-3 Regular User Page(After Be Allocated 15th Floor Camera Permission)

1.4.2.3 Image Setting

It can **control AI platform save pictures rule and limit the alarm video's length**.Click the top bar **[System]**, and click the side bar **[Image Setting]** into the page.

- Parameter describe:

①**Cyclic Coverage**——will base the percentage you set to cyclic Coverage,it ensures that the system can continuously record new image information without the need to manually clear storage space.

②**Image Cyclic Storage Percentage Threshold**——when Hard Disk Utilization up to xx%,platform will automatically delete some oldest pictures,let Hard Disk Utilization keep xx%(Can set personalized)

③**Save Warning Image**——when detection,platform will save warning image into Image

④**Save original Image**——when detection,platform will save original image into Image

⑤**Save Warning Video**——when detection,platform will save warning video into Image

⑥**Alarm Video Duration**——limit the warning video duration

(About ③④⑤，algorithm should open corresponding options to let setting take effect)

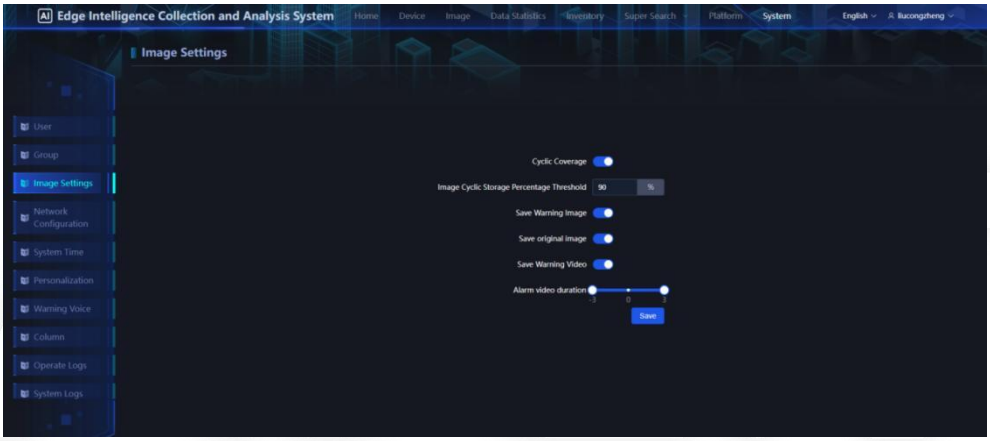


Figure1.4.1.3-1 Image Setting Page

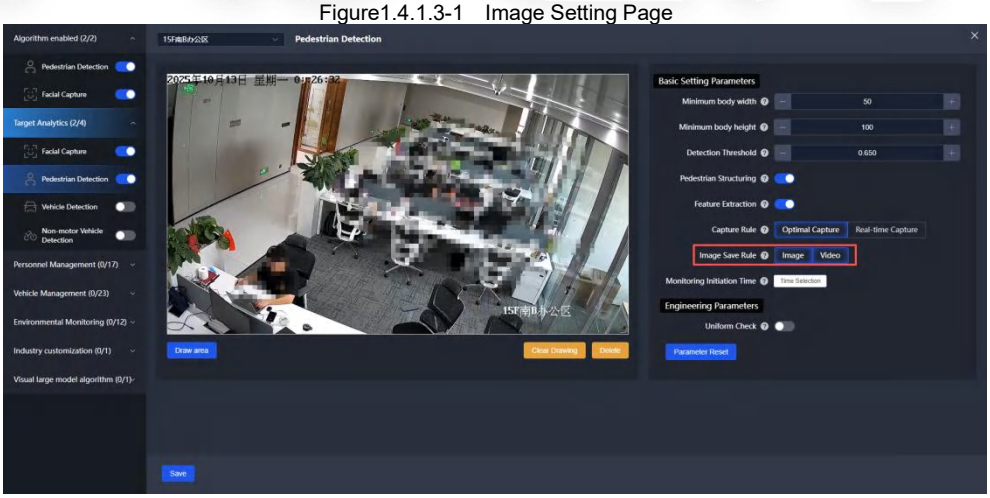


Figure1.4.1.3-2 Algorithm "Image Save Rule" Affect Setting

1.4.2.4 Network Configuration

See 1.3.2 Network Setting

1.4.2.5 System Time

Synchronize time to current local time to prevent problem happen while using AI platform.Should make sure Device time same as local time.

You can use **NTP** to synchronize,or you can **set time manually**.

Click the top bar **[System]**,and click the side bar **[System time]** to synchronize time.

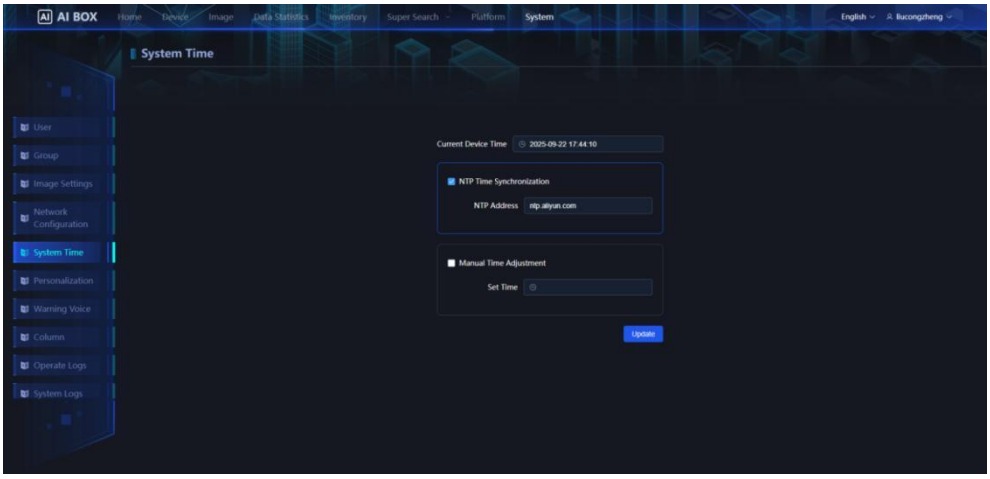


Figure1.4.1.5 System Time Page

1.4.2.6 Personalization

The **icon and system name** of the Ai platform **can be personalized**.

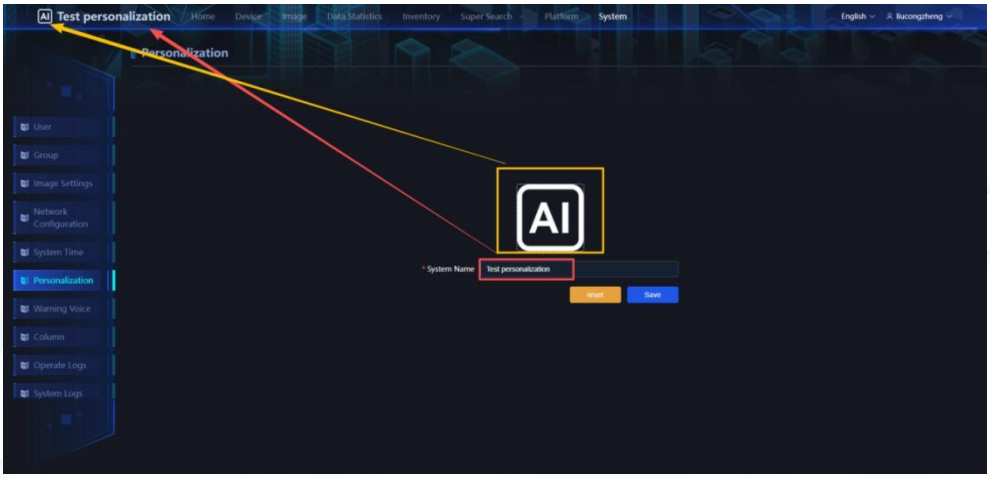


Figure1.4.1.6 Personalization Page

1.4.2.7 Warning Voice

AI platform alarm sound default is Chinese.In Warning Voice page,**can personalized warning voice content in order to better meet the actual usage scenario of users**.

Click the top bar **[System]**,click the left side bar **[Warning Voice]**,click **[Upload]** button change algorithm's alarm voice(**MP3 format**),then **[Dispatch Warning Voice]**,algorithm alarm voice can be changed.**[Recover]** will turn back to default Chinese alarm sound.

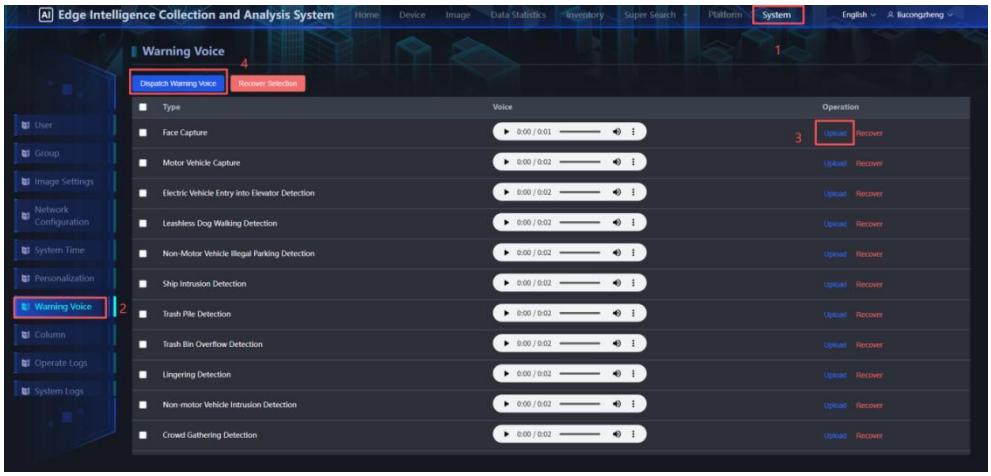


Figure1.4.1.7 Warning Voice Page

MP3 voice generate can use this website:https://ttsmaker.cn/,if still don't know how to make personalized alarm voice,can contact our technical engineer.

1.4.2.8 Column

The system supports the integration of IP speaker columns, which can be installed anywhere as long as they are within the same LAN as the node. Once connected, alarm event audio (in MP3 format) can be broadcast through the IP column.

Figure1.4.1.8-1 Specification Of Ip Speaker Column

Rated power	Speaker unit	Power supply	Dimension
20W	4"×1	DC12V/POE	123×125×215mm
40W	4"×2	DC12V	150×95×345mm
60W	4.5"×3	DC12V	150×95×465mm
80W	4.5"×4	DC12V	150×95×585mm
100W	4.5"×5	DC24V	150×95×705mm

Figure1.4.1.8-2 Parameter Of Ip Speaker Column

Warning:At present, only the company's own ip speaker columns are compatible,if want to use own ip speaker columns,please offer HTTP protocol to technical engineer,we will do adaptation.

①Connecting the IP Speaker Column:

- Install the IP speaker column's client software on a PC (contact the manufacturer's engineer to obtain it), which is used to configure speaker parameters and obtain the IP address.

Figure1.4.1.8-3 IP speaker column's client software

- Then open the software, and connect the speaker column to power and the network via an Ethernet cable. Ensure that the speaker column, node, and PC are on the same LAN, then click "Search Devices" to detect the IP address assigned via DHCP. Finally, enter this IP address into the node system.

②Integrating the Speaker into the Node System:

The default port is 80, and the volume can be adjusted. If the volume is insufficient, increase the maximum volume limit in the terminal configuration software.

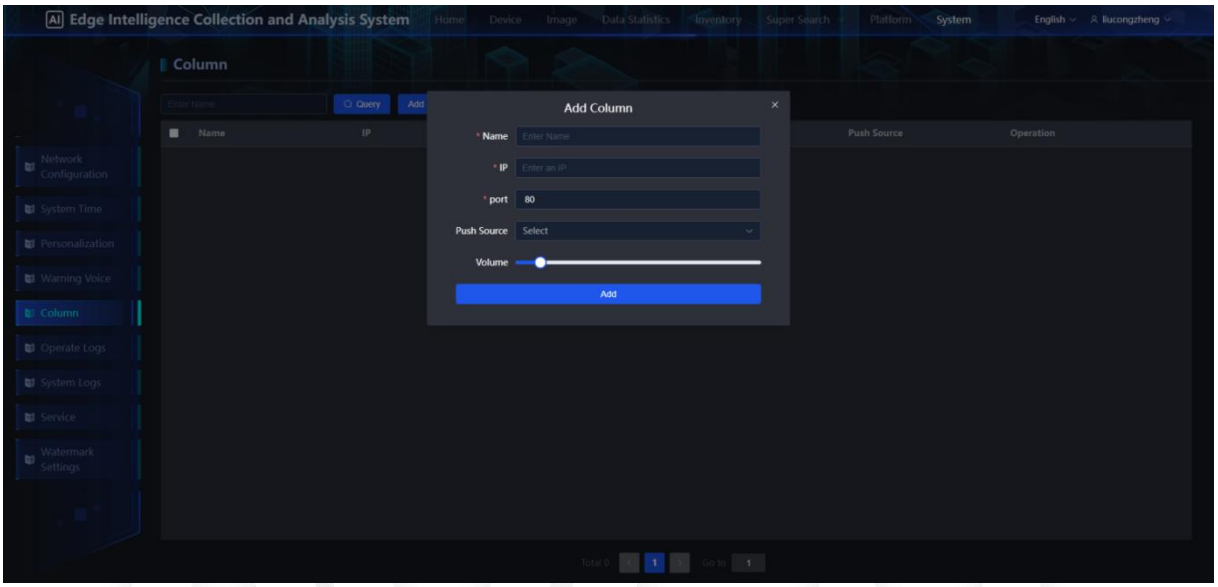


Figure1.4.1.8-4 Column Page

After integration, go to [set] and select the speaker to broadcast alarm notifications for specific video channels. Once the corresponding channels are checked, the alarm events generated by the algorithm will be broadcast through the speaker.

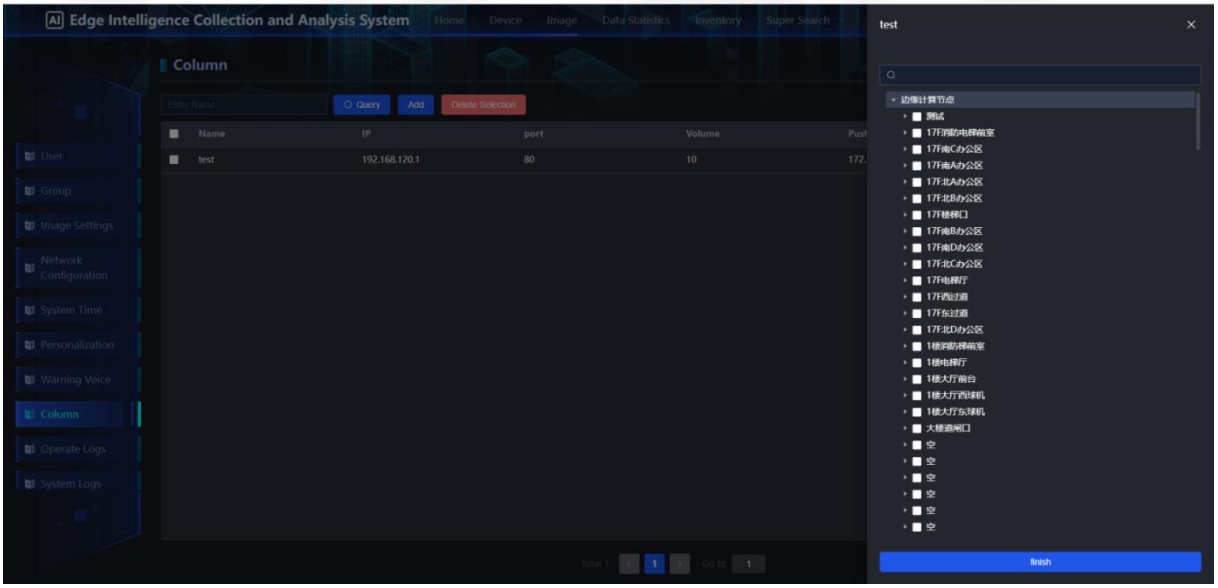


Figure1.4.1.8-3 How To Let Specified Camera Alarm Voice Play By Ip Speaker Column

1.4.2.9 Operate Log

Can check every users operations in this page.Can precisely query the time zone or users or about some camera's operations.

Click the top bar [System],the side bar [Operate Log] to the page.

Figure1.4.1.9 Operate Log Page

1.4.2.10 Watermark Setting

AI platform support login with watermark,user can personalized watermark content.Once the screen content is illegally photographed or leaked, the watermark can be used to trace the relevant responsible party or provide search clues. It is enabled by default and can be manually turned off when not needed.

Click the top bar [System],and the side bar [Watermark Setting] to the page.

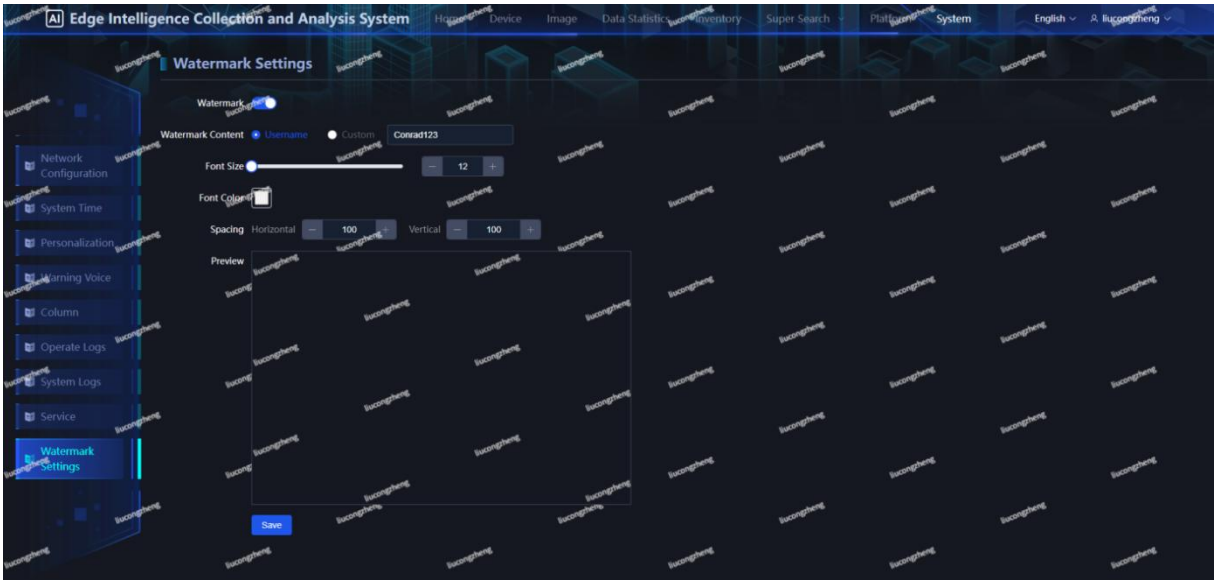


Figure1.4.1.10 Watermark Setting Page

2. Algorithm Configuration

The following provides detailed explanations of various application scenarios, introducing the algorithms, their use cases, and requirements. To achieve maximum accuracy, please carefully read this section before configuring the algorithms.

2.1 Target Analytic

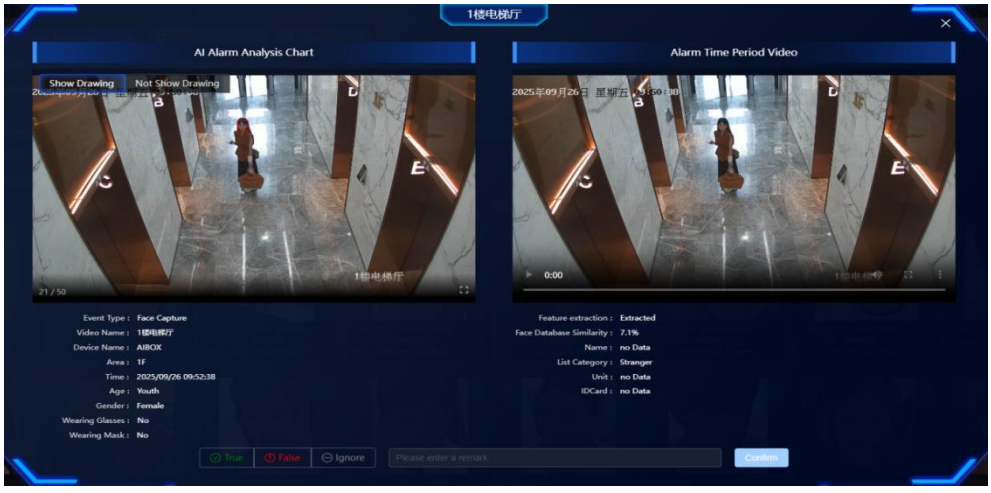
2.1.1 Facial Capture

①**Description:**It captures and records the trajectory of human faces that move under the camera, and can compare them with the blacklist and whitelist of human faces in the database. If the matching is successful, an alarm prompt will be generated.**Different than** 2.2.1Face Recognitione recognition **algorithm,is not real-time capture.**

②**Camera Requirements**:The resolution shall not be lower than 2K. Light conditions such as back-lighting, strong light, low light, glare, and night infrared shall be avoided. The recognition distance shall be less than 10 meters, and the front face must be captured normally; the angle and height shall not be too deviated or too high.

③**Application Scenarios**:Suitable for airports, train stations, shopping malls, office buildings, and other locations requiring identity recognition and feature extraction.

④**Example of image detection:**



⑤Algorithm recommendation usage scenarios:

The face in the image shall be clear

appropriate angle and good lighting

⑥The algorithm is not applicable to scenarios:

Crowded and Long-Distance Scenario

Nighttime Dark and Low-Light Scenarios

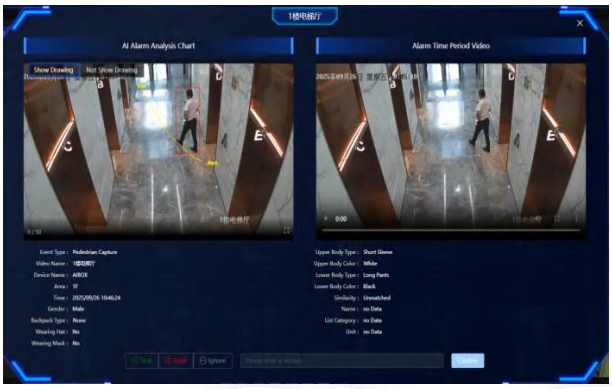
2.1.2 Pedestrian Detection

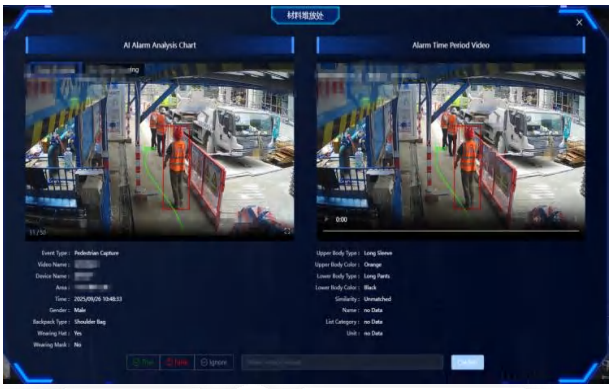
①**Description:**It captures and records the trajectory of moving pedestrians under the camera, and can compare them with the work uniform list in the database. If the matching is successful, an alarm prompt will be generated

②**Camera Requirements:**The minimum video resolution shall be 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and human features shall be clear and unobstructed.

③**Application Scenarios:**Commercial blocks, public area monitoring, tourist attractions, campuses, airports and other public places.

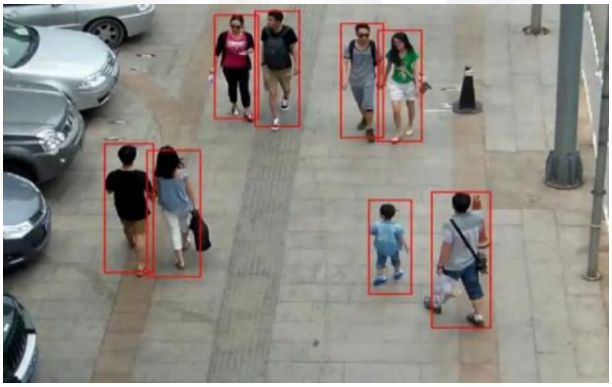
④**Example of image detection:**





⑤**Algorithm recommendation usage scenarios:**

pedestrian trajectory shall be clear



appropriate angle and good lighting

⑥**The algorithm is not applicable to scenarios:**

Crowded and Long-Distance Scenario

Nighttime Dark and Low-Light Scenarios

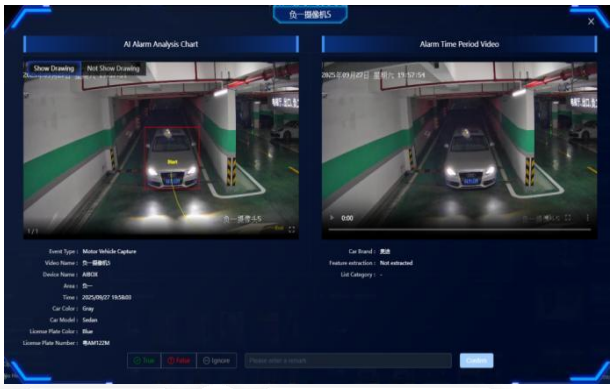
2.1.3 Vehicle Detection

①**Description:**It captures and records the trajectory of moving motor vehicles under the camera, and can compare them with the license plate list in the database. If the matching is successful, an alarm prompt will be generated.

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and the license plate features shall be clear and unobstructed, with the vehicle body also clearly visible.

③**Application Scenarios:**Urban arterial roads, highway entrances, parking lot entrances and exits, transportation hubs, etc.

④**Example of image detection:**



⑤**Algorithm recommendation usage scenarios:**

Vehicles and license plates are clear

good angles and lighting

⑥**The algorithm is not applicable to scenarios:**

Vehicles are far away and blurry

scenarios with strong vehicle lights at night

2.1.4 Non-motor Vehicle Detection

①**Description:**It captures and records the trajectory of moving non-motor vehicles under the camera.

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and the features of non-motor vehicles shall be clear and unobstructed.

③**Application Scenarios:**Urban roads, park entrances and exits, community entrances and exits, etc.

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The picture is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Intersections with too many people

Dark and low-light scenarios at night

2.2 Personnel Management

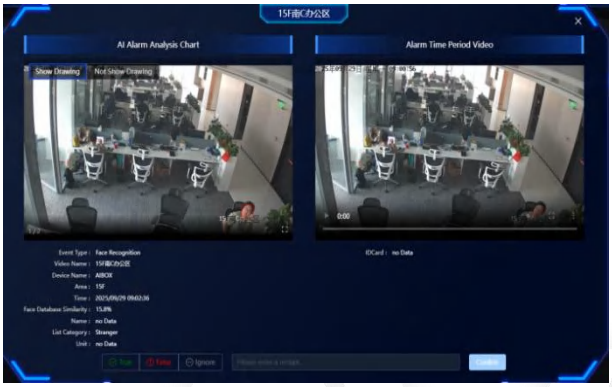
2.2.1Face Recognition

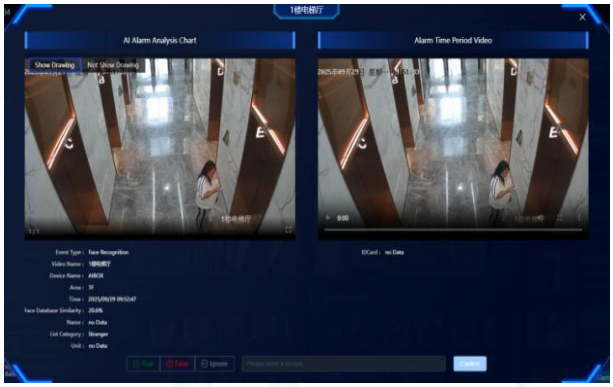
①**Description:**It recognizes facial features and compares them with known faces in the Inventory.

②**Camera Requirements:**The video resolution shall not be lower than 2K. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 10 meters, and the front face shall be captured normally; the angle and height shall not be too deviated or too high.

③**Application Scenarios:**Suitable for airports, train stations, shopping malls, office buildings, and other locations requiring identity recognition and feature extraction.

④**Example of image detection:**





⑤**Algorithm recommendation usage scenarios:**

The face in the image shall be clear

appropriate angle and good lighting

⑥**The algorithm is not applicable to scenarios:**

Crowded and Long-Distance Scenario

Nighttime Dark and Low-Light Scenarios

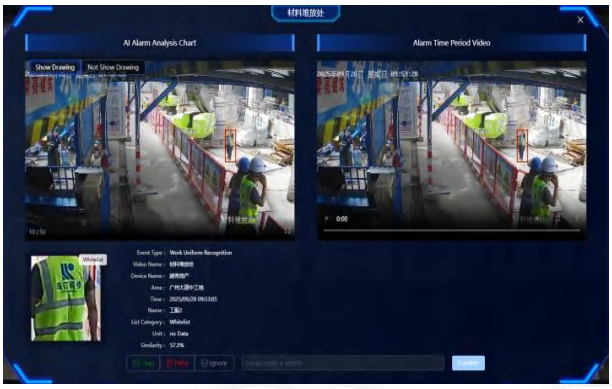
2.2.2Work Uniform Recognition

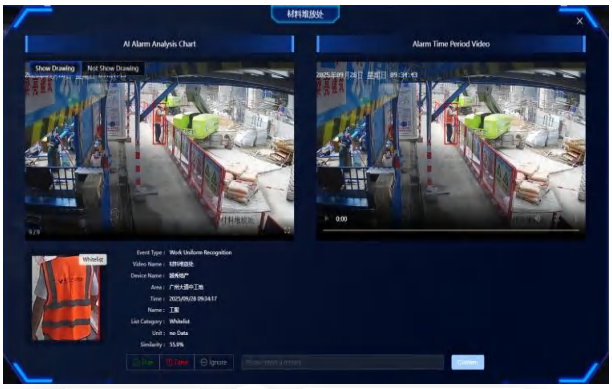
①**Description:**It identifies personnel wearing specific uniforms, such as airport security staff, police officers, and mining area workers.

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and the features of work uniforms shall be clear and unobstructed.

③**Application Scenarios:**Uniform recognition can be applied to scenarios such as enterprise park management and commercial retail employee management, enabling personnel identification distinction and efficient control.

④**Example of image detection:**





⑤**Algorithm recommendation usage scenarios:**

The picture is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Crowded and Long-Distance Scenario

Nighttime Dark and Low-Light Scenarios

2.2.3 Lingering Detection

①**Description:**It detects people who stay in a specific area for a long time.

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and human features shall be clear and unobstructed.

③**Application Scenarios:**Prevent suspicious persons from lingering in sensitive areas for a long time

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The human figure in the picture is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Too far away and complex background

Dark and infrared scenarios at night

2.2.4 Intrusion Detection

①**Description:**It detects personnel who enter the designated area without authorization.

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, and glare shall be avoided. The recognition distance shall be less than 20 meters, and human features shall be clear and unobstructed.

③**Application Scenarios:**Protect important areas (such as warehouses, laboratories, etc.) from unauthorized access.

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The picture is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Too far away and complex background

Dark and infrared scenarios at night

2.2.5 Crowd Gathering Detection

①**Description:**It identifies whether there is an abnormal number of people gathering in the current video frame

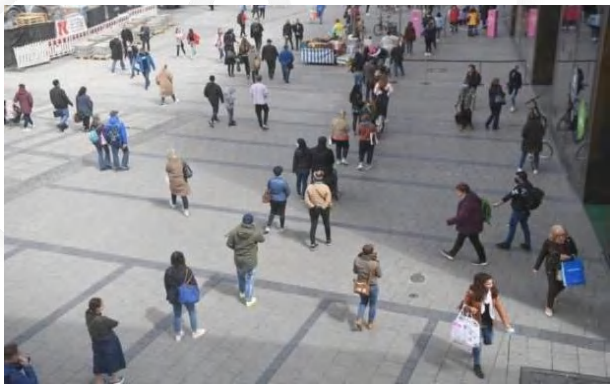
②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and human features shall be clear and unobstructed.

③**Application Scenarios:**Safety management of public places (such as stations and shopping malls) to prevent crowd stampede accidents

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The image of the human head is clear



Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

The personnel are dense and the distance is too far

The background is too complex

2.2.6 Fall Detection

①**Description:**It detects whether anyone has fallen down

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 15 meters, and human features shall be clear and unobstructed.

③**Application Scenarios:**It is used in places such as nursing homes and hospitals to detect falls of the elderly or patients in a timely manner.

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

Open scene

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Crowded and Long-Distance Scenario

Nighttime Dark and Low-Light Scenarios

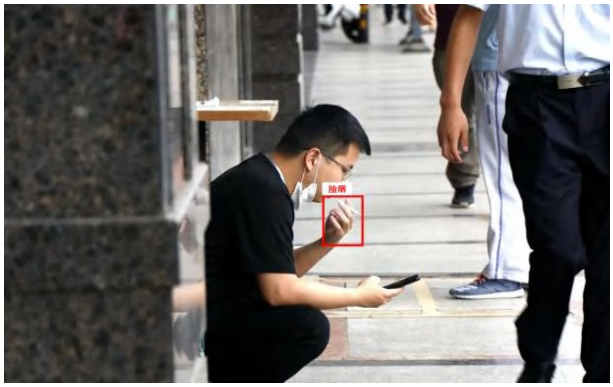
2.2.7Smoking Detection

①**Description:**It identifies whether there is smoking behavior in the video

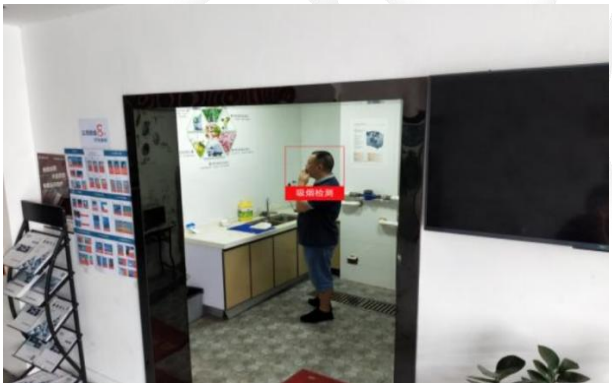
②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 15 meters, and human facial features shall be clear and unobstructed.

③**Application Scenarios:**It is used in no-smoking areas, such as restaurants and office spaces, to ensure no one violates the rules.

④**Example of image detection:**



⑤**Algorithm recommendation usage scenarios:**



The picture is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Crowded and Long-Distance Scenario

Nighttime Dark and Low-Light Scenarios

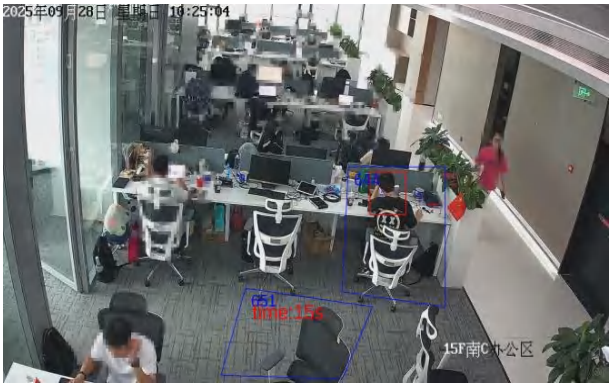
2.2.8 Absenteeism Detection

①**Description:**It detects whether staff members leave their posts without permission

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and human features shall be clear and unobstructed.

③**Application Scenarios:**It is used in positions that require continuous staffing, such as monitoring rooms, to supervise whether employees are on duty on time.

④**Example of image detection:**



⑤**Algorithm recommendation usage scenarios:**

The picture of the person is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

The person is severely obscured

Workstations are too dense

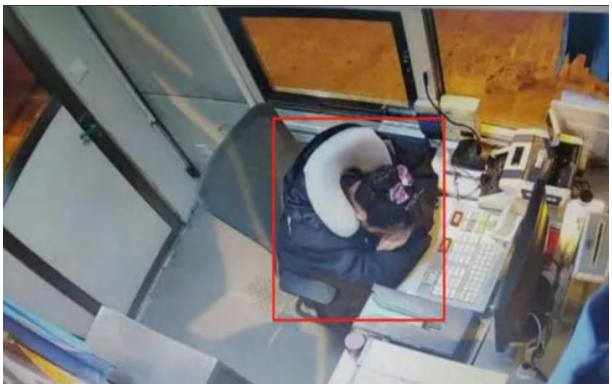
2.2.9 Sleep on duty detection

①**Description:**It identifies whether employees are in a sleeping state during working hours

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 10 meters, and human features shall be clear and unobstructed.

③**Application Scenarios:**It is used in positions that require continuous staffing to ensure employees remain alert.

④**Example of image detection:**



⑤**Algorithm recommendation usage scenarios:**

The workstation area is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

The person is severely obscured

Workstations are too dense

2.2.10 Mobile Phone Detection

①**Description:**It identifies whether staff members use mobile phones during working hours

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 15 meters, and human hand features shall be clear and unobstructed.

③**Application Scenarios:**Driver safety monitoring and other occasions where mobile phone use is prohibited

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The monitor picture is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Crowded and Long-Distance Scenario

Nighttime Dark and Low-Light Scenarios

2.2.11 No mask Detection

①**Description:**It detects whether anyone in the surveillance video fails to wear a mask as required

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 15 meters, and human facial features shall be clear and unobstructed.

③**Application Scenarios:**Places where mask-wearing is mandatory, such as hospitals, shopping malls, and corporate workshops

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The face image is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Crowded and Long-Distance Scenario

Nighttime Dark and Low-Light Scenarios

2.2.12 No Helmet Detection

①**Description:**It detects whether anyone in the surveillance video fails to wear a safety helmet as required

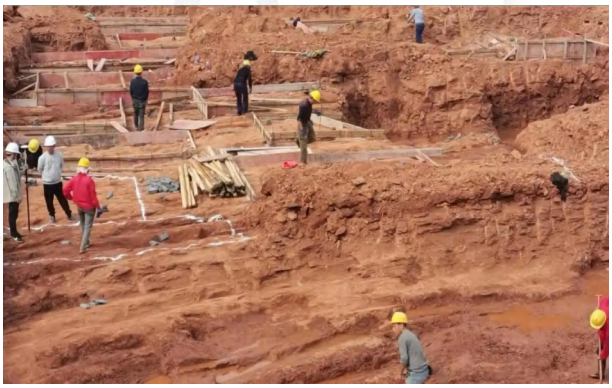
②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and human head features shall be clear and unobstructed.

③**Application Scenarios:**It is used in environments with high safety requirements such as construction sites and mines to ensure that workers wear safety helmets in accordance with regulations.

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

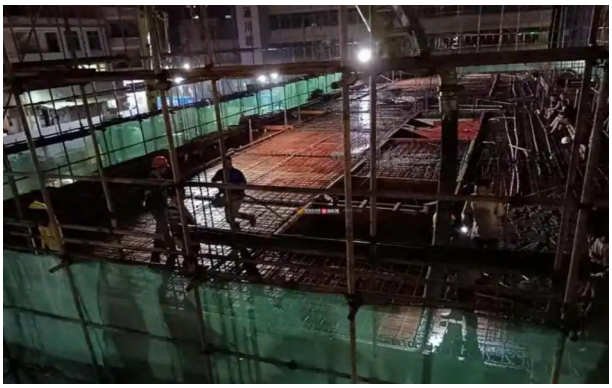
The head picture is clear



Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Far distance and complex background



Darkness at night and low-night scenes

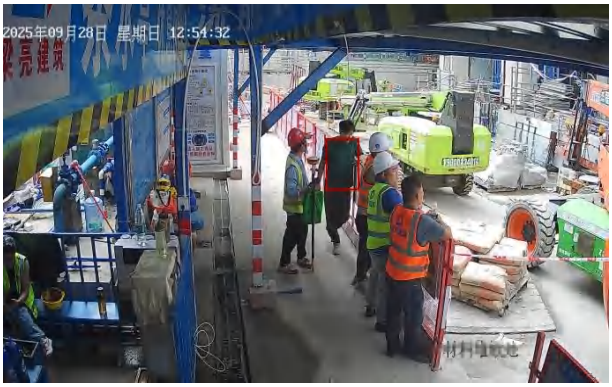
2.2.13 High-Visibility Clothing Non-Wearing Detection

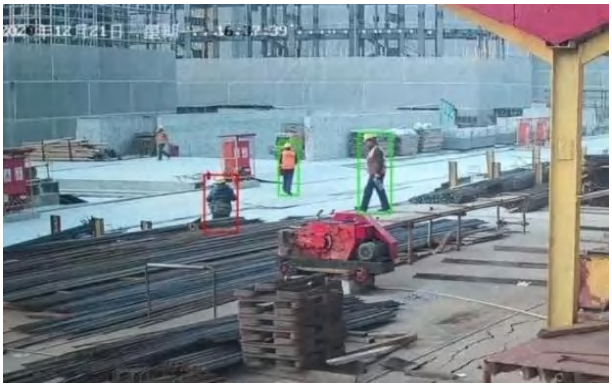
①**Description:**It detects whether anyone in the surveillance video fails to wear a reflective vest as required

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and the features of human body parts shall be clear and unobstructed.

③**Application Scenarios:**It is used in low-visibility environments such as nighttime work areas and road construction zones to ensure workers wear reflective clothing for improved safety.

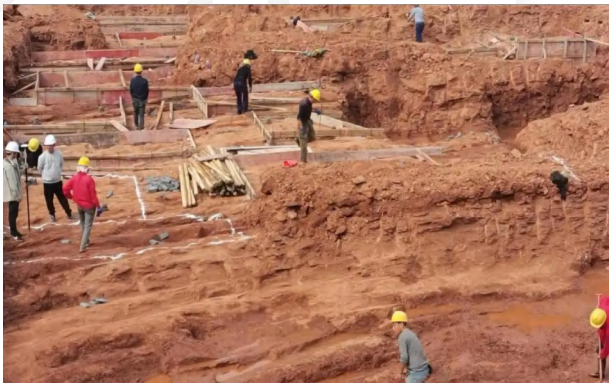
④**Example of image detection:**





⑤**Algorithm recommendation usage scenarios:**

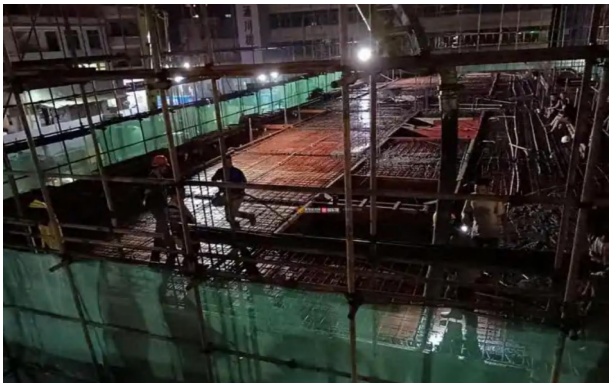
The human body picture is clear



Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Far distance and complex background



Darkness at night and low-night scenes

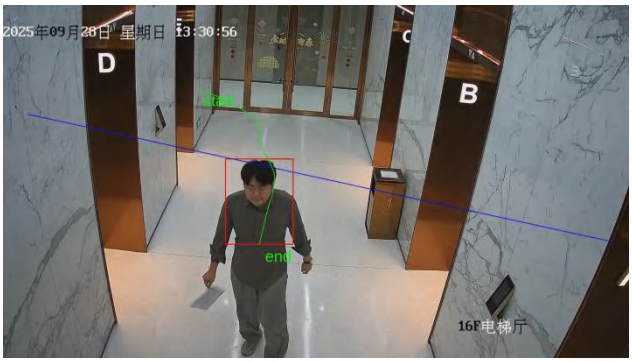
2.2.14 Pedestrian traffic statistic

①**Description:**It identifies and tracks pedestrians, and calculates the number of people entering and exiting a specific area per unit time

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and human features shall be clear and unobstructed.

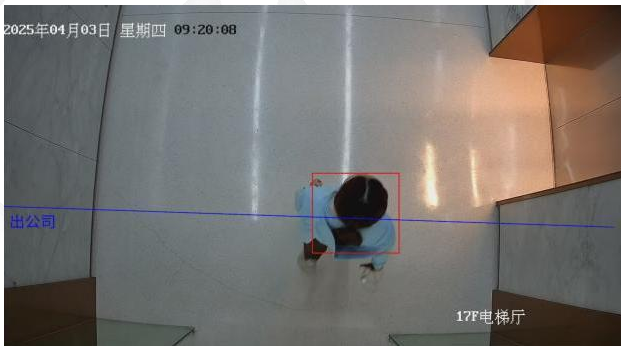
③**Application Scenarios:**Entrances and exits of public places such as commercial streets, shopping malls, tourist attractions, subway stations, and airports

④**Example of image detection:**



⑤**Algorithm recommendation usage scenarios:**

The human head picture is clear



Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Crowded and Long-Distance Scenario

Nighttime Dark and Low-Light Scenarios

2.2.15 Personnel Stay Duration

①**Description:**It tracks personnel entering the designated area, counts their stay time at the location, and is used to analyze the passenger flow stay duration

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and human features shall be clear and unobstructed.

③**Application Scenarios:**It is suitable for places that need to monitor the duration of personnel stay, such as shopping malls, stations, and exhibition halls

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The human figure in the picture is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Crowded and Long-Distance Scenario

Nighttime Dark and Low-Light Scenarios

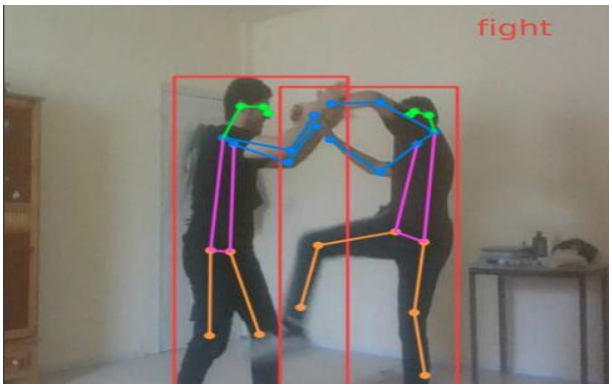
2.2.16 Fighting detection

①**Description:**It detects whether there is fighting behavior in the video

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and human features shall be clear and unobstructed.

③**Application Scenarios:**It is used in public places to detect violent conflicts in a timely manner

④**Example of image detection:**



⑤**Algorithm recommendation usage scenarios:**

The picture is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Crowded and Long-Distance Scenario

Nighttime Dark and Low-Light Scenarios

2.2.17 Person Climbing Detection

①**Description:**It analyzes whether a person is engaging in climbing or crossing behaviors. If such behaviors are detected, the system will be notified, and relevant personnel will be informed to intervene and stop them.

②**Camera Requirements:**The resolution shall not be lower than 1080P. Light conditions such as backlight, strong light, low light, reflection, and nighttime infrared shall be avoided. The recognition distance shall be less than 15 meters, and human features shall be clear and unobstructed.

③**Application Scenarios:**It is used in reservoir fences, restricted entry areas, and other locations to detect whether personnel are climbing over or crossing

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The monitor screen is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Video angle range is too large

Nighttime Dark and Low-Light Scenarios

2.3 Vehicle Management

2.3.1 Electric Vehicle Entry into Elevator Detection

①**Description:**Check if anyone is pushing electric bikes into elevators or households in violation of regulations.

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and human features shall be clear and unobstructed.

③**Application Scenarios:**In elevators, to ensure that electric vehicle are not being brought inside

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The picture is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

The features of the e-bike are obscured

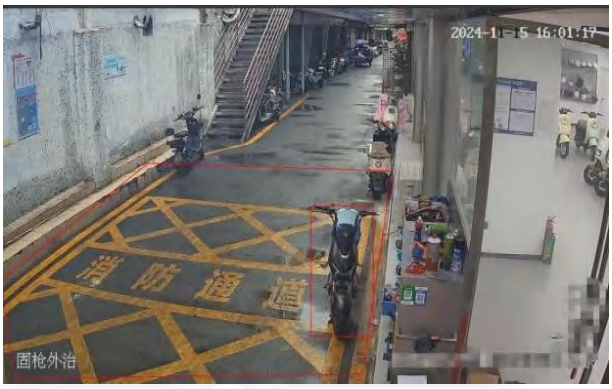
2.3.2 Non-Motor Vehicle illegal Parking Detection

①**Description:**It identifies whether non-motor vehicles are parked in prohibited parking areas in violation of regulations.

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and vehicle features shall be clear and unobstructed.

③**Application Scenarios:**It is used to monitor whether non-motorized vehicles (such as bicycles and electric bicycles) are parked illegally in areas where parking is not allowed.

④**Example of image detection:**



⑤**Algorithm recommendation usage scenarios:**

The monitoring screen is clear

The angle and lighting are good

⑥**The algorithm is not applicable to scenarios:**

The monitoring screen is clear

Intersections that are overly chaotic

2.3.3 Non-motor Vehicle Intrusion Detection

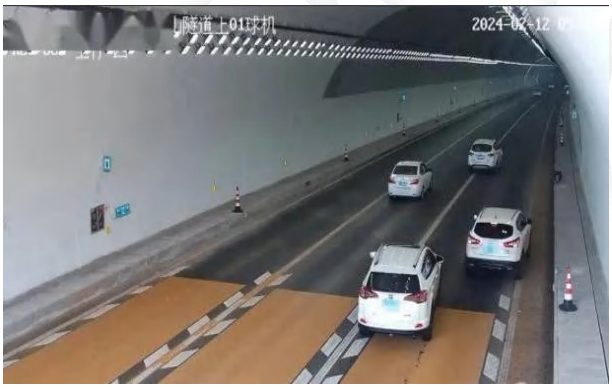
①**Description:**It identifies whether non-motor vehicles drive into no-entry areas.

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and vehicle features shall be clear and unobstructed.

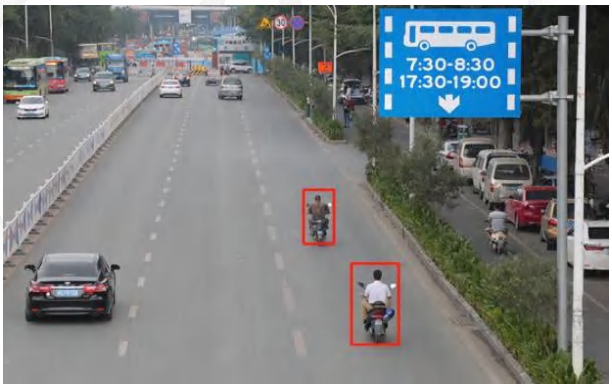
③**Application Scenarios:**It is suitable for areas where non-motorized vehicles are prohibited, such as schools, factories, residential complexes, tunnels, and motor vehicle lanes.

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**



Urban tunnel monitoring



Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Overly chaotic intersections

Low-light and dim-light environments at night

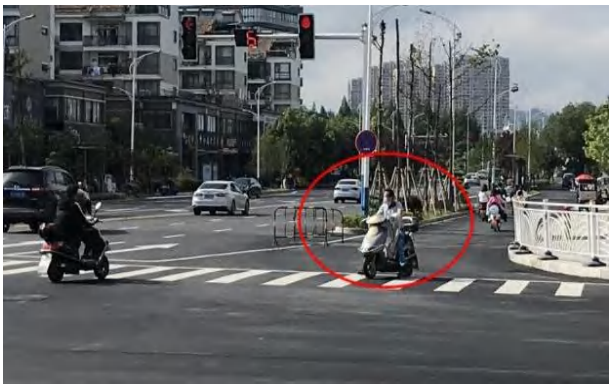
2.3.4 Non-vehicle wrong-way driving detection

①**Description:**It detects whether electric bicycles are driving in the opposite direction.

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and vehicle features shall be clear and unobstructed.

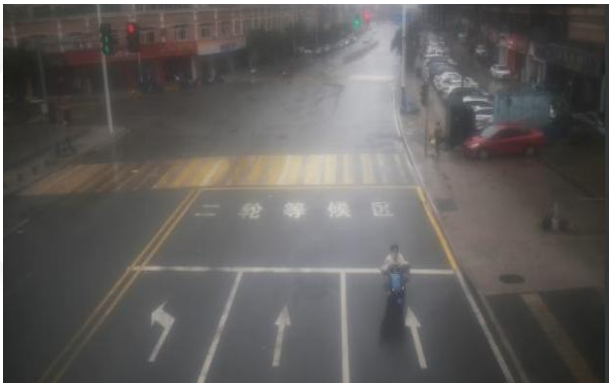
③**Application Scenarios:**It is suitable for scenarios such as sidewalks and bicycle lanes.

④**Example of image detection:**



⑤**Algorithm recommendation usage scenarios:**

The picture is clearly



Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Overly chaotic intersections

Low-light and dim-light environments at night

2.3.5 Electric vehicle helmet non-wearing detection

①**Description:**It identifies whether riders of electric vehicles (including motorcycles) on the road are wearing safety helmets.

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 30 meters, and vehicle features shall be clear and unobstructed.

③**Application Scenarios:**It is applied in urban roads, bicycle lanes, and other areas to monitor whether e-bike riders are wearing safety helmets

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The helmet picture is clearly

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Overly chaotic intersection

dim-light and low-light environment at night

2.3.6 Electric Vehicle Passenger Detection

①**Description:**It detects whether non-motor vehicles are carrying passengers in violation of regulations.

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and vehicle features shall be clear and unobstructed.

③**Application Scenarios:**It is suitable for places that need to restrict e-bikes from carrying passengers, such as schools, parks and residential areas.

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The helmet picture is clearly

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Overly chaotic intersection

Low-light and dim-light environment at night

2.3.7 Food Delivery Rider Detection

①**Description:**It detects whether food delivery riders ride in or out of the residential community.It can count the entry and exit frequency of food delivery riders or their stay duration, and trigger an alarm

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and vehicle features shall be clear and unobstructed.

③**Application Scenarios:**It is suitable for areas with frequent food delivery services, such as shopping malls, office buildings and residential areas.

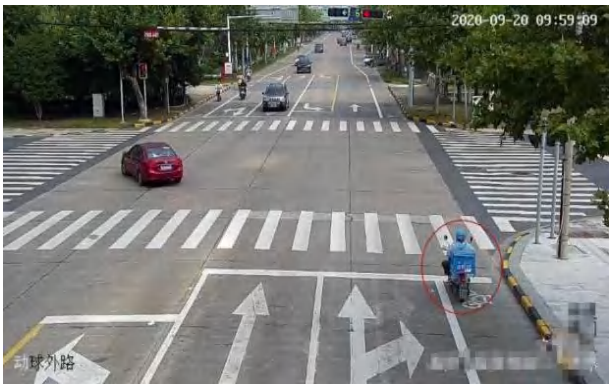
④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

Food delivery riders are not allowed to ride in the community

Notice prohibit food delivery electric vehicles

⑥**The algorithm is not applicable to scenarios:**



Non-Food delivery vehicle restricted area

low-light and dim-light environment at night

2.3.8 Illegal Parking Detection of Shared Bicycles

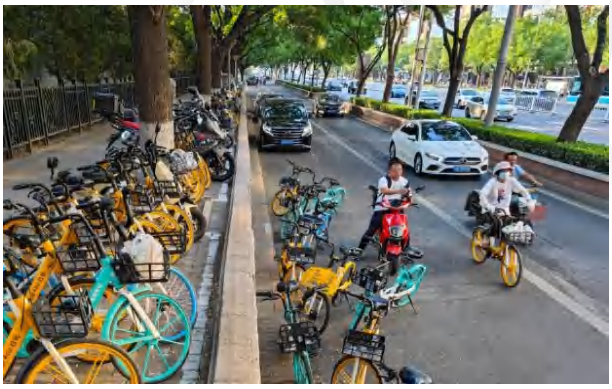
①**Description:**Check if anyone has illegally parked shared bikes

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and vehicle features shall be clear and unobstructed.

③**Application Scenarios:**It is used in urban streets, sidewalks, and other areas to monitor whether shared bicycles are parked in accordance with regulations.

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**



The picture is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Parking areas with heavy obstructions

Intersections that are overly chaotic

2.3.9 Illegal Parking Detection of Motor Vehicles

①**Description:**It detects whether motor vehicles in the video frame are parked in prohibited parking areas in violation of regulations.

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and vehicle features shall be clear and unobstructed.

③**Application Scenarios**:It is used in urban streets, commercial areas, residential areas, and other locations to monitor unauthorized parking behaviors on the roads.

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The car license plate pictures are clearly

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Overly chaotic intersection

Dim-light and low-light environment at night

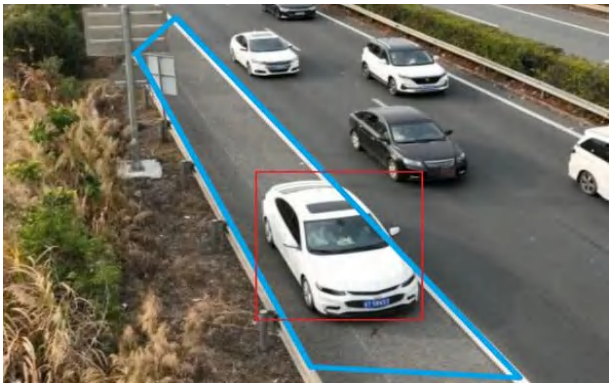
2.3.10 Motor Vehicle Intrusion Detection

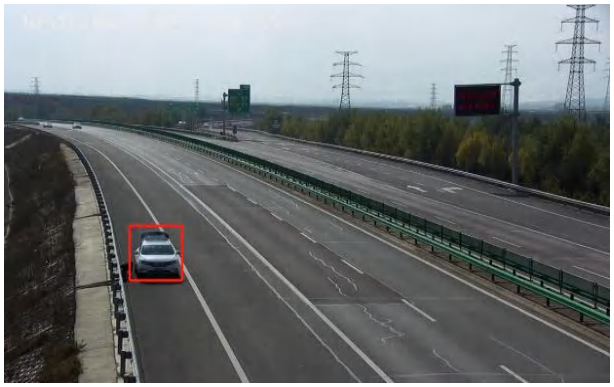
①**Description:**It identifies whether vehicles drive into no-entry areas.

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and vehicle features shall be clear and unobstructed.

③**Application Scenarios:**It is suitable for areas where motor vehicles are prohibited, such as schools, hospitals, pedestrian streets, and emergency lanes.

④**Example of image detection:**



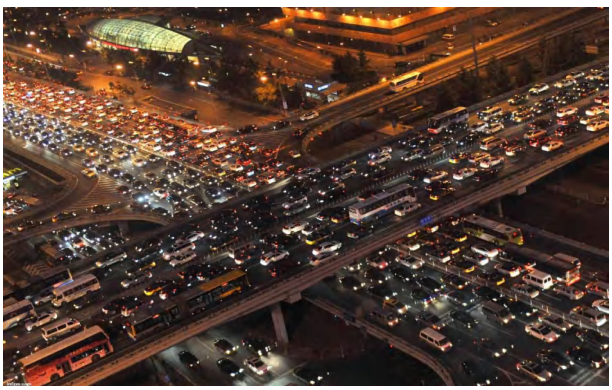


⑤**Algorithm recommendation usage scenarios:**

highway emergency lane

areas prohibited for motor vehicle entry

⑥**The algorithm is not applicable to scenarios:**



road sections with too large a field of vision and no main subject

Dim-light and low-light environment at night

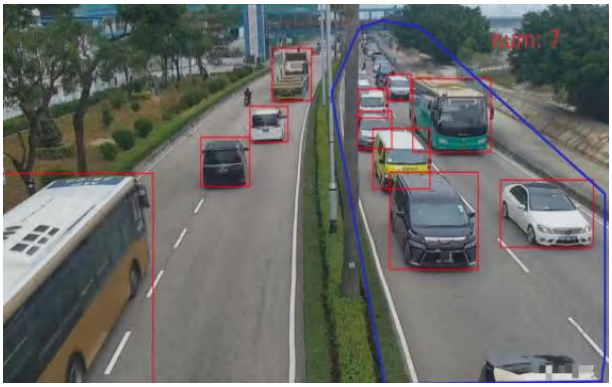
2.3.11 Traffic Congestion Detection of Motor Vehicles

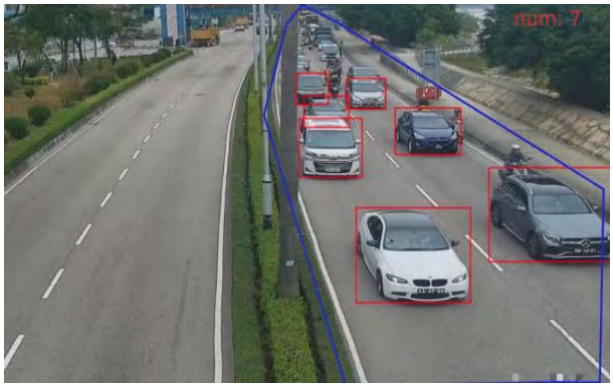
①**Description:**It identifies vehicle congestion on the road and provides traffic flow status information.

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and vehicle features shall be clear and unobstructed.

③**Application Scenarios:**It is used to monitor traffic flow in real time, and promptly detect and warn of traffic congestion situations.

④**Example of image detection:**



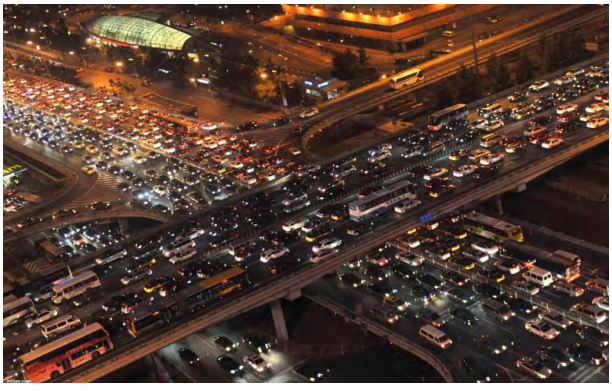


⑤**Algorithm recommendation usage scenarios:**

The images of vehicles on the road are clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**



road sections with too large a field of vision and no main subject

Dim-light and low-light environment at night

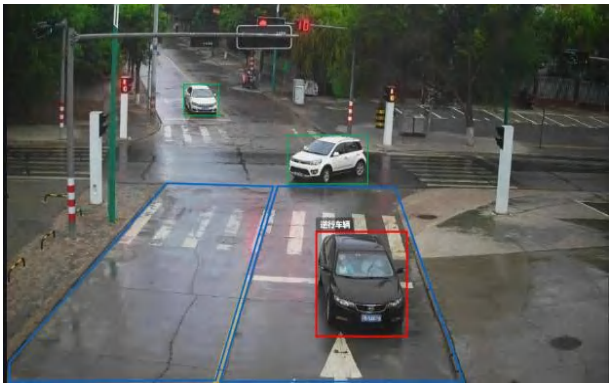
2.3.12 Motor Vehicle Reverse Driving Detection

①**Description:**It detects whether there is a phenomenon of motor vehicles driving in the opposite direction in the video frame.

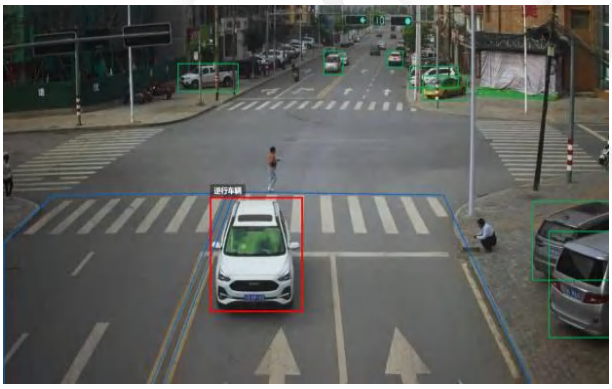
②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and vehicle features shall be clear and unobstructed.

③**Application Scenarios:**It is applicable to scenarios such as urban roads, expressways, and internal factory roads.

④**Example of image detection:**



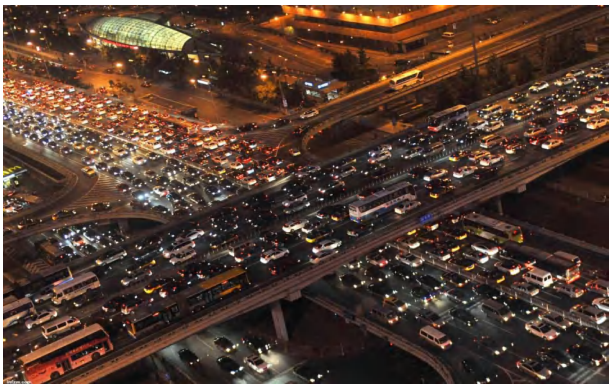
⑤**Algorithm recommendation usage scenarios:**



The car picture is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**



road sections with too large a field of vision and no main subject

Dim-light and low-light environment at night

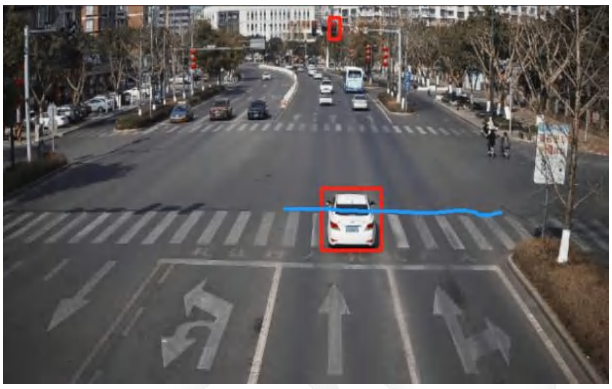
2.3.13 Electric vehicle red light violation capture

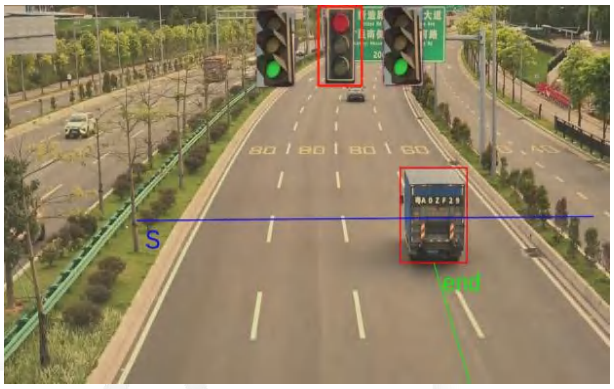
①**Description:**At the intersection, it detects whether motor vehicles run red lights in violation of regulations.

②**Camera Requirements:**The resolution shall not be lower than 2K. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and the camera shall be installed directly above the intersection. It shall be able to capture the complete traffic lights and vehicles at the intersection, with clear features of vehicles and license plates.

③**Application Scenarios**:It is applicable to areas such as urban intersections and arterial roads where strict control of traffic signal violations is required.

④**Example of image detection:**





⑤**Algorithm recommendation usage scenarios:**

Urban Traffic Light Intersection 1

Urban Traffic Light Intersection 2

⑥**The algorithm is not applicable to scenarios:**

Intersections without traffic lights or where traffic lights are not visible

Dim-light and low-light environment at night

2.3.14 License Plate Recognition

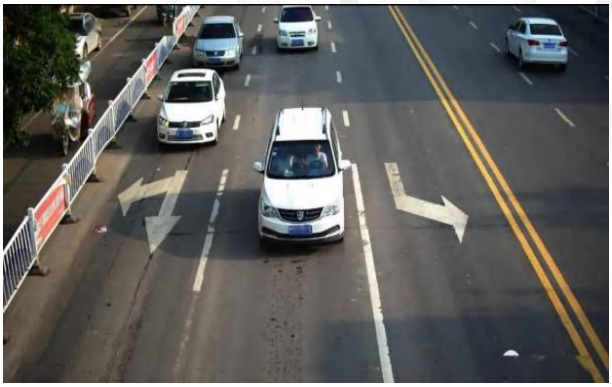
①**Description:**It automatically recognizes vehicle license plate numbers, which can be used for traffic management, parking lot access control, and other purposes.

②**Camera Requirements:**The resolution shall not be lower than 2K. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and the license plate features shall be clear and unobstructed.

③**Application Scenarios:**It is used in road toll gates, parking lot entrances, major urban intersections, and other locations to automatically recognize the license plate numbers of passing vehicles.

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**



The cars and car licenses are clear

The angle and lighting at the gate are good

⑥**The algorithm is not applicable to scenarios:**

The vehicle is far away and appears blurry

Scenarios with strong vehicle lights at night

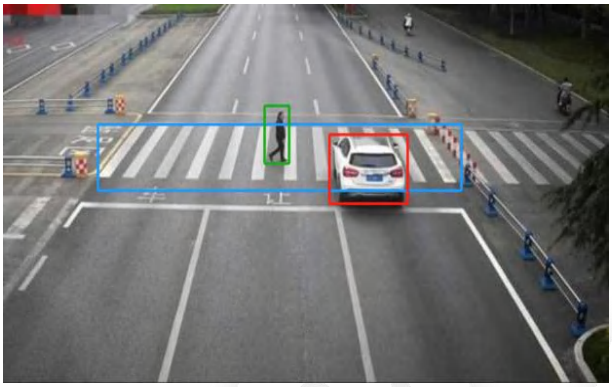
2.3.15 Failure To Yield Detection

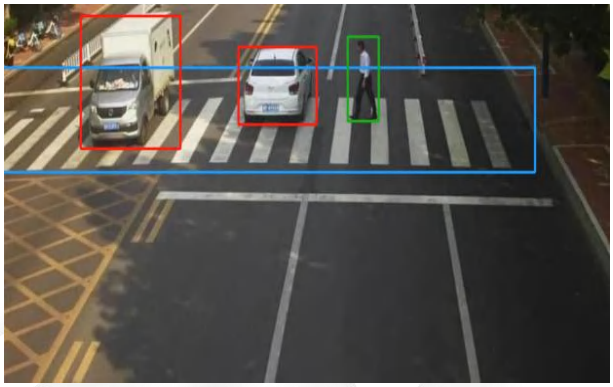
①**Description:**At the intersection, it detects whether motor vehicles violate regulations by failing to yield to pedestrians.

②**Camera Requirements:**The resolution shall not be lower than 2K. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and the camera shall be installed directly above the intersection. It shall be able to capture the complete traffic lights, as well as the vehicles, pedestrians, and zebra crossings at the intersection, with clear features of vehicles and license plates.

③**Application Scenarios:**It is applicable to pedestrian - dense areas such as crosswalks, school surroundings, and sidewalks.

④**Example of image detection:**





⑤**Algorithm recommendation usage scenarios:**

Urban Traffic Light Intersection 1

Urban Traffic Light Intersection 2

⑥**The algorithm is not applicable to scenarios:**

Non - front or rear view of the vehicle (unable to capture the license plate)

Dim-light and low-light environment at night

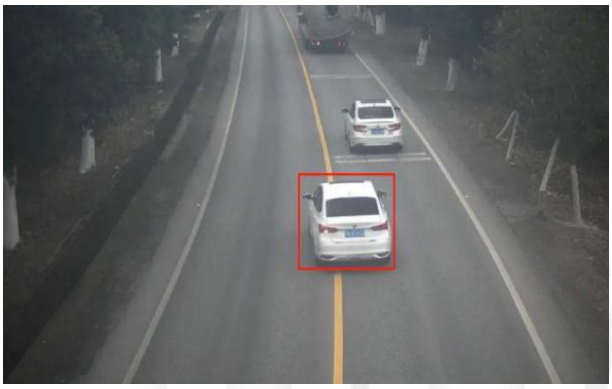
2.3.16 Solid line U-turn detection

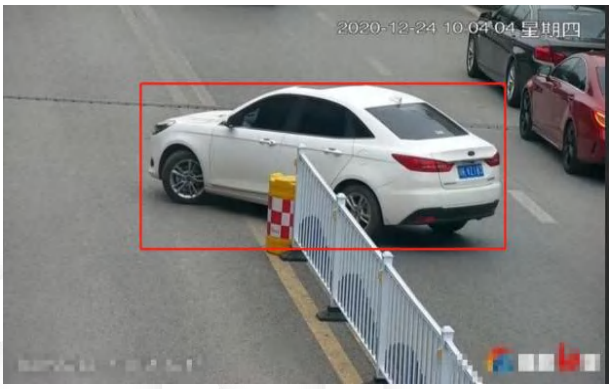
①**Description:**Based on lane line recognition and vehicle trajectory tracking, it detects illegal U-turns or lane changes in solid-line areas, captures the process of vehicles crossing the line, recognizes license plates, and triggers an alert.

②**Camera Requirements:**The resolution shall not be lower than 2K. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters; if license plate recognition is required, analysis shall be conducted under videos where license plates are clearly visible. The vertical viewing angle shall cover the complete lane lines. Backlight compensation shall be supported to ensure that road markings are clearly distinguishable both during the day and at night.

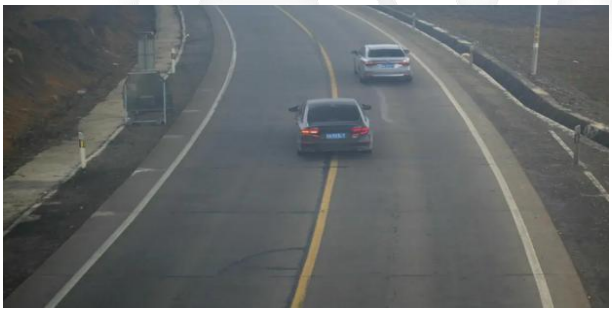
③**Application Scenarios:**It is applicable to areas such as urban roads, bridges, and tunnel entrances where lane changes across solid lines or U-turns are prohibited.

④**Example of image detection:**

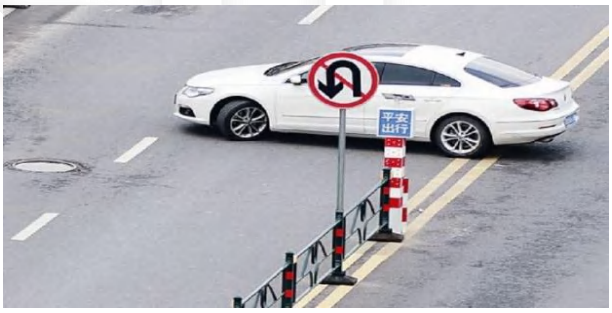




⑤**Algorithm recommendation usage scenarios:**

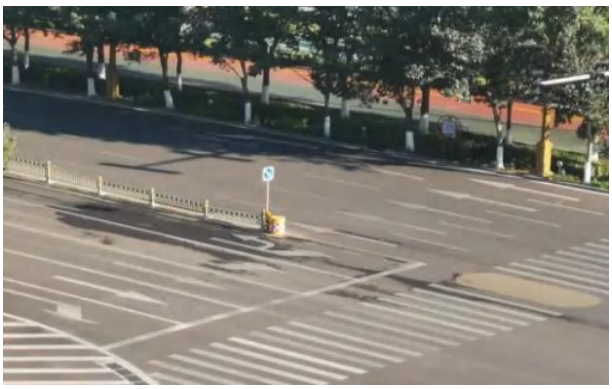


Road with solid lines



Urban intersection where U - turns are prohibited on solid lines

⑥**The algorithm is not applicable to scenarios:**



Non - lane - level surveillance

Dim-light and low-light environment at night

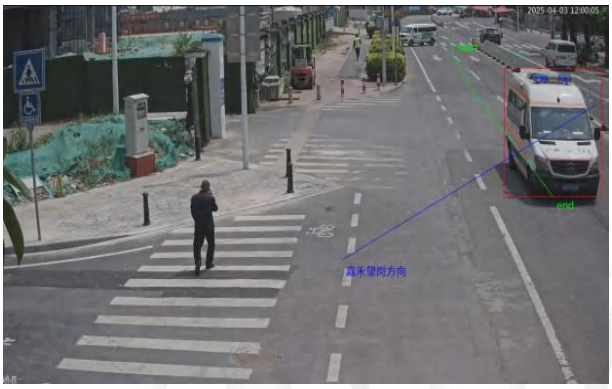
2.3.17 Emergency vehicle capture

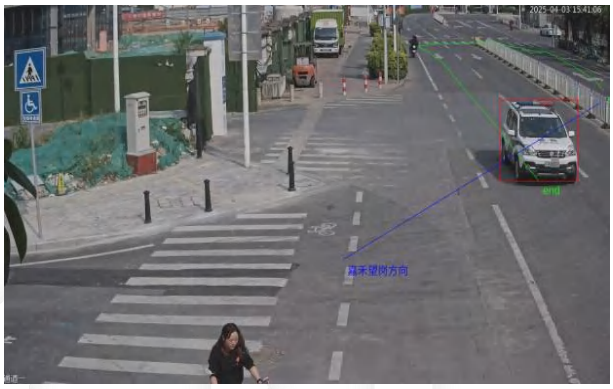
①**Description:**It identifies the features of special vehicles (such as ambulances, fire engines, and police cars), captures images of emergency vehicles when they are dispatched, and notifies relevant personnel for emergency response.

②**Camera Requirements:**The resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters. The camera shall be installed at an inclined angle to cover the lanes and the tops of vehicles, and direct exposure to strong light shall be avoided to prevent impact on recognition.

③**Application Scenarios:**It is applicable to areas that require real-time tracking of emergency vehicle dispatch, such as residential compounds, emergency lanes, hospital entrances/exits, and emergency management bureaus.

④**Example of image detection:**



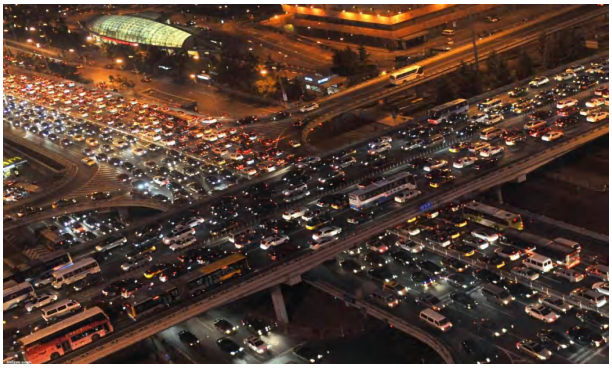


⑤**Algorithm recommendation usage scenarios:**

Residential area monitoring (with early warning)

Urban traffic light intersection

⑥**The algorithm is not applicable to scenarios:**



road sections with too large a field of vision and no main subject

Dim-light and low-light environment at night

2.3.18 Inspection of large construction vehicles

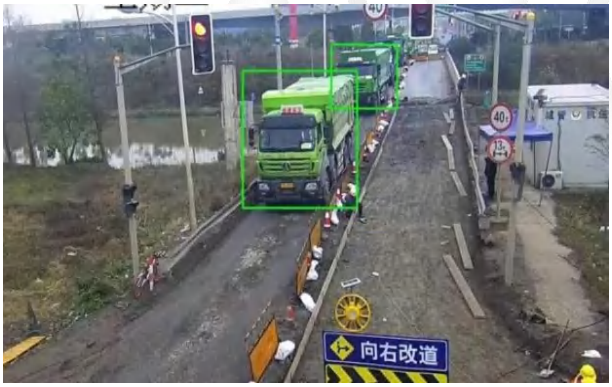
①**Description:**It identifies the type of vehicles entering the monitoring area, determines whether they are large construction site vehicles, and records their entry and exit times as well as license plate numbers.

②**Camera Requirements:**The resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and the vehicle features shall be clear and unobstructed

③**Application Scenarios:**It is applicable to places such as construction sites and mining areas that require monitoring of large construction vehicles.

④**Example of image detection:**

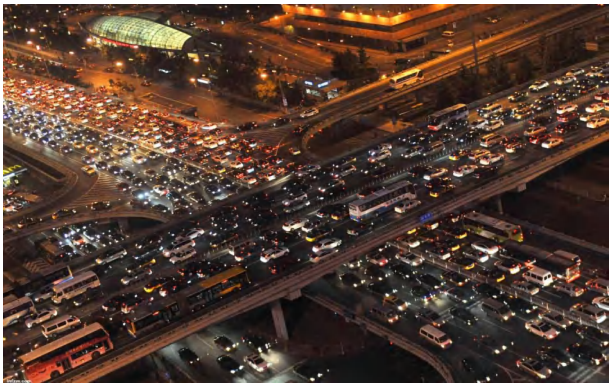
⑤**Algorithm recommendation usage scenarios:**



construction site vehicle access

high point of the vehicle entrance and exit of construction site

⑥**The algorithm is not applicable to scenarios:**



road sections with too large a field of vision and no main subject

Dim-light and low-light environment at night

2.3.19 Heavy vehicle detection

①**Description:**It detects large engineering vehicles, such as large trucks, buses, coaches, and so on.

②**Camera Requirements:**The resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and the vehicle features shall be clear and unobstructed

③**Application Scenarios:**It is applicable to expressways, urban arterial roads, etc., and is used to monitor whether large trucks, buses, etc. are overloaded or driving during prohibited hours.

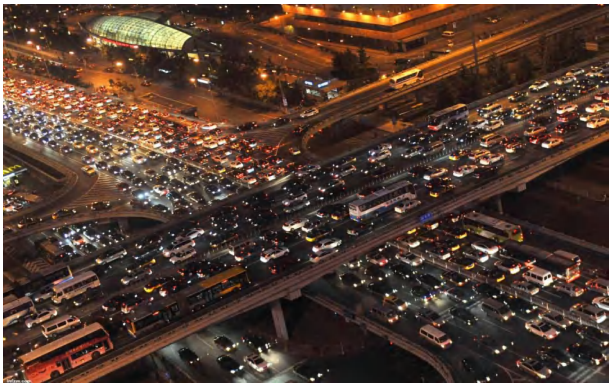
④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The picture is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**



road sections with too large a field of vision and no main subject

Dim-light and low-light environment at night

2.3.20 Detection of Unenclosed Vehicle Cargo Compartment

①**Description:**It is applicable to the vicinity of construction sites, main roads, and other areas, and is used to monitor whether muck trucks engage in illegal transportation or have uncovered cargo compartments.

②**Camera Requirements:**The resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and the features of muck trucks shall be clearly displayed, including the vehicle model and loading status.

③**Application Scenarios:**It is applicable to areas such as the vicinity of construction sites and major roads, and is used to monitor whether muck trucks are engaged in illegal transportation or operating with uncovered cargo beds.

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The vehicle image is clear

The angle is good, allowing capture of the carriage details

⑥**The algorithm is not applicable to scenarios:**

Insufficient height prevents capture of the upper cargo bed

Dim-light and low-light environment at night

2.3.21 Hazardous materials vehicle nighttime restriction detection

①**Description:**By analyzing vehicle body features (such as hazardous material labels and tank structures), it detects hazardous chemical vehicles driving into toll stations at night—including unregistered vehicles and those passing in violation of regulations—and sends real-time alerts to on-duty personnel.

②**Camera Requirements:**The resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and the features of muck trucks shall be clearly displayed, including the vehicle model and loading status.

③**Application Scenarios:**It is applicable to places such as highway toll stations and national road checkpoints, which require key monitoring of hazardous chemical transportation vehicles, and special inspections are carried out during nighttime.

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

Unattended Toll Booth/Unattended Toll Gate

Night-time Toll Station/Toll Station at Night

⑥**The algorithm is not applicable to scenarios:**

Highway Pavement Surveillance
(Unable to Detect Dangerous Goods Markings)

The vehicle speed is too fast to recognize the dangerous goods markings

2.3.22 Large Bus Nighttime Driving Ban Detection

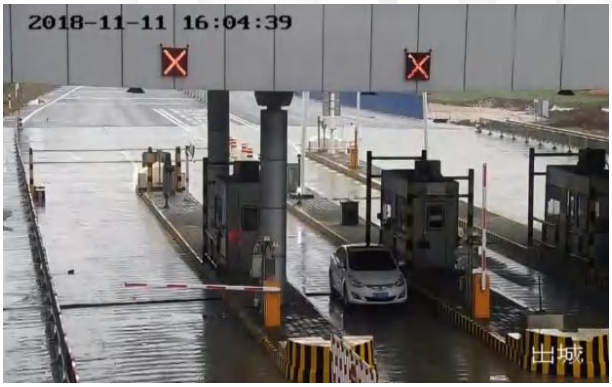
①**Description:**Based on vehicle type recognition, it determines whether buses traveling at night meet operational qualifications (e.g., unregistered vehicles, vehicles passing in violation of regulations), sends real-time alerts to on-duty personnel, and enforces the night-time bus ban (2:00am-6:00am).

②**Camera Requirements:**The resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 20 meters, and the camera shall cover the front and side viewing angles of the lane to ensure that license plates and vehicle body marks are clear and unobstructed.

③**Application Scenarios**:It is applicable to places such as highway toll stations and passenger transport hubs that require supervision of long-distance passenger vehicles at night.

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**



Unattended Toll Booth/Unattended Toll Gate

Night-time Toll Station/Toll Station at Night

⑥**The algorithm is not applicable to scenarios:**

Lane Vehicle Surveillance (can be used to detect coaches, but not a business focus of this algorithm)

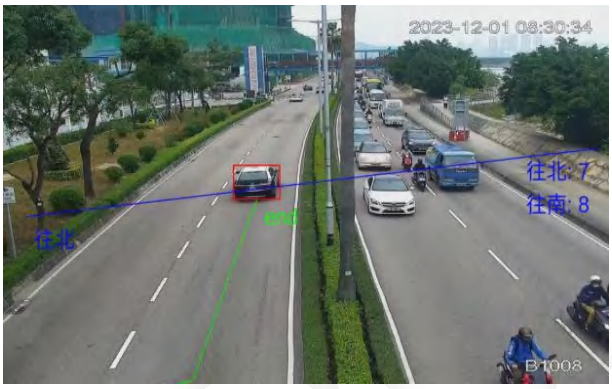
2.3.23 Vehicle traffic statistic

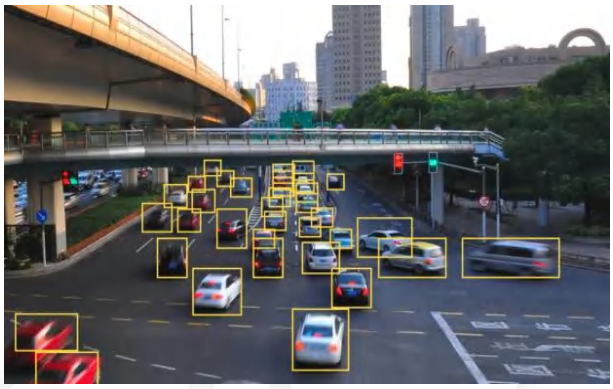
①**Description:**It identifies and tracks moving vehicles, and calculates the number of vehicle flows entering and exiting a specific area per unit time.

②**Camera Requirements:**The resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and vehicle features shall be clear and unobstructed.

③**Application Scenarios:**Urban arterial roads, highway entrances, parking lot entrances and exits, transportation hubs, etc.

④**Example of image detection:**



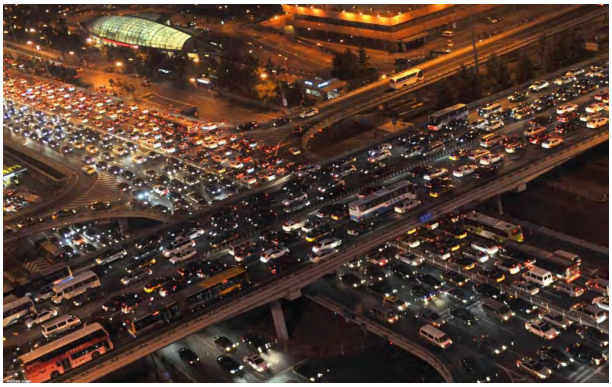


⑤**Algorithm recommendation usage scenarios:**

The images of vehicles on the road are clear

The angle and lighting are good

⑥**The algorithm is not applicable to scenarios:**



road sections with too large a field of vision and no main subject

Dim-light and low-light environment at night

2.4 Environmental Monitoring

2.4.1 Trash Pile Detection

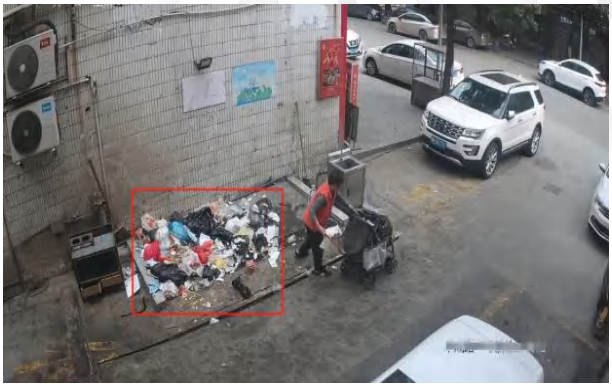
①**Description:**It detects whether there is litter in the video frame.

②**Camera Requirements:**The video resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 30 meters, and the features of garbage piles shall be clear and unobstructed.

③**Application Scenarios:**Public places, residential areas, garbage dumping areas, etc.

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**



High-frequency garbage dumping sites

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Urban streets with easily distracting backgrounds

Complex night vision scenarios

2.4.2 Trash Bin Overflow Detection

①**Description:**It detects whether the trash cans in the video frame are overflowing.

②**Camera Requirements:**The resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 30 meters, and the features of garbage piles shall be clear and unobstructed.

③**Application Scenarios:**Public trash bins, garbage collection points, etc.

④**Example of image detection:**

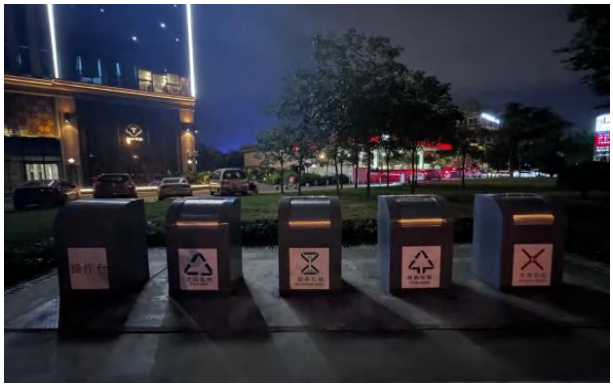
⑤**Algorithm recommendation usage scenarios:**

Trash bin area

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Areas without trash bins



Unconventional trash bin shapes

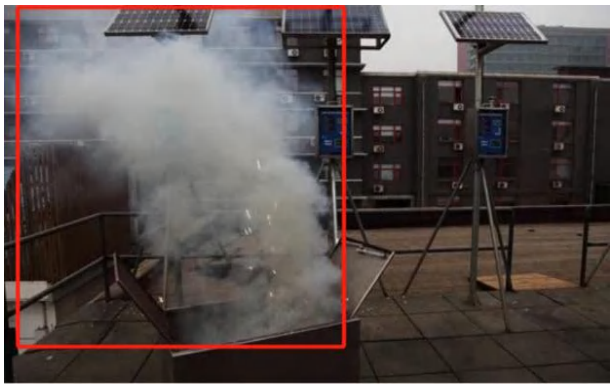
2.4.3 Smoke Detection

①**Description:**It detects whether there is a phenomenon of thick smoke rising in the frame, effectively preventing potential fire hazards.

②**Camera Requirements:**The resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and the features of smoke shall be clear and unobstructed.

③**Application Scenarios**:Industrial areas, forests, residential areas, etc.

④**Example of image detection:**



⑤**Algorithm recommendation usage scenarios:**

The thick smoke is relatively obvious

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Blue sky and white clouds

Heavy fog weather

2.4.4 Open Fire Detection

①**Description:**It detects whether there is an open flame in the frame, effectively preventing potential fire hazards.

②**Camera Requirements:**The resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and the features of flames shall be clear and unobstructed.

③**Application Scenarios:**Flammable and explosive places, kitchens, and no-open-flame areas, etc.

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

Ordinary flames

Flammable ignition points

⑥**The algorithm is not applicable to scenarios:**

Yellow lights at night

Neon lights in cities at night

2.4.5 Prohibited Banner Detection

①**Description:**It detects whether there is an illegal banner-hanging phenomenon in the frame.

②**Camera Requirements:**The resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 50 meters, and the features of banners shall be clear and unobstructed.

③**Application Scenarios:**Scenarios where banner-hanging is prohibited, such as public places, streets, and police stations

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The banner image is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Complex background and long distance

Complex night scenes

2.4.6 Door and Window Status Detection

①**Description**:It monitors the opening and closing status of fire doors in real time. If a fire door is detected to be left open for an extended period, it immediately sends a reminder and notifies the management personnel

②**Camera Requirements:**The resolution shall not be lower than 1080p. Light conditions such as backlight, strong light, low light, reflection, and night infrared shall be avoided. The recognition distance shall be less than 20 meters, and the clarity shall be sufficient to identify the status of the door

③**Application Scenarios**:It is applicable to the fire door management of places such as office buildings, residential buildings, and shopping malls

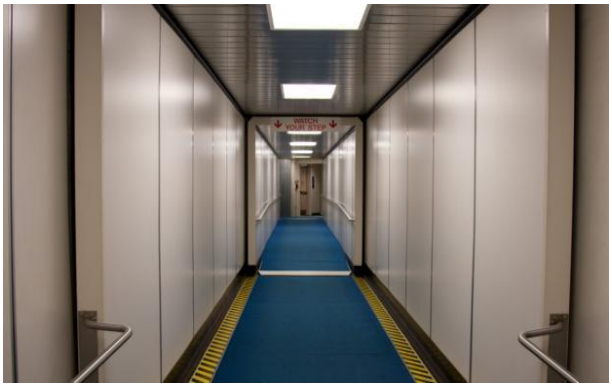
④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The monitor picture is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**



The door status cannot be clearly seen due to excessive distance

Dim-light and low-light environment at night

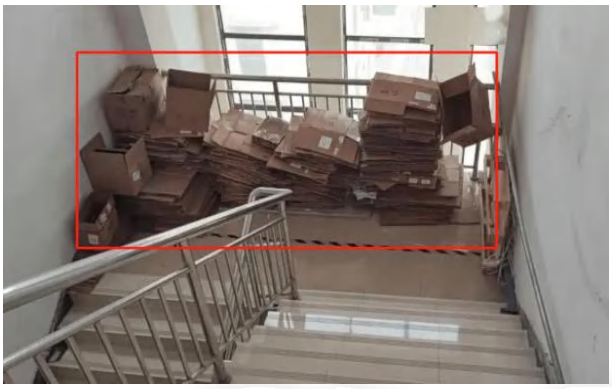
2.4.7 Flammable Material Storage Detection

①**Description:**It identifies whether there is a phenomenon of flammable materials piling up in the area. If abnormal accumulation is detected, it immediately issues an alarm and notifies managers to handle the situation.

②**Camera Requirements:**The resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 30 meters, and the features of flammable materials shall be clear and unobstructed.

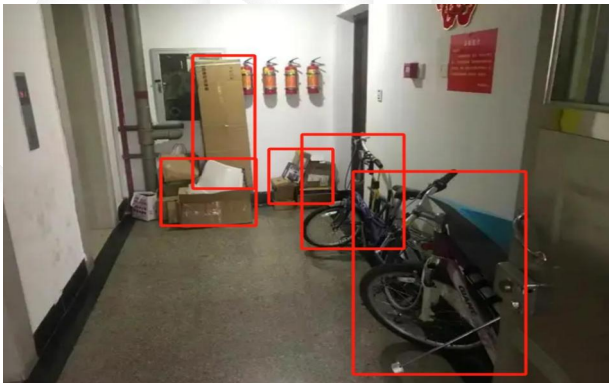
③**Application Scenarios:**It is applicable to places storing flammable and explosive materials, such as warehouses, chemical plants, and gas stations.

④**Example of image detection:**



⑤**Algorithm recommendation usage scenarios:**

The picture is clear



Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Outdoor fire access routes

Dim-light and low-light environment at night

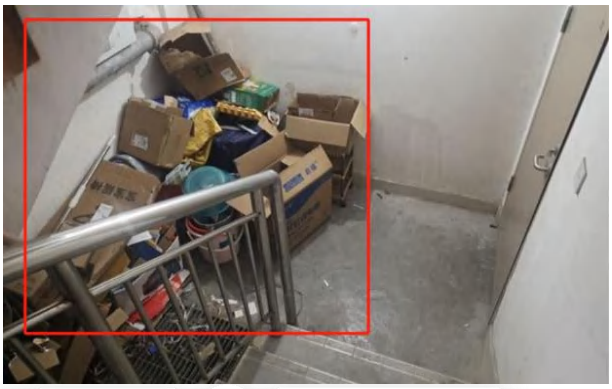
2.4.8 Fire Lane Obstruction Detection

①**Description:**It monitors in real time whether fire exits are occupied or blocked. If obstacles are detected, it immediately issues an alarm and notifies relevant personnel to clear the exits.

②**Camera Requirements:**The resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 30 meters, and the view of the fire escape route shall be clear and unobstructed.

③**Application Scenarios:**It is applicable to the fire exits in public places such as office buildings, shopping malls, and hospitals.

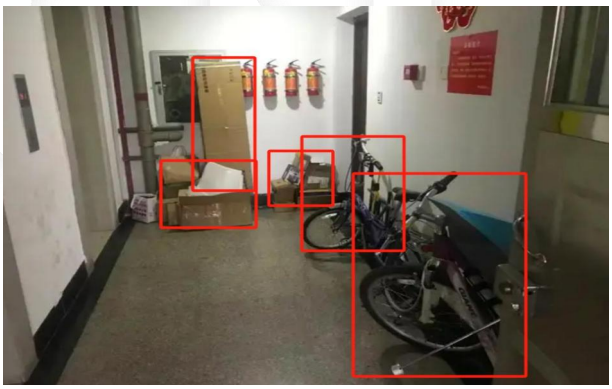
④**Example of image detection:**



5

⑤**Algorithm recommendation usage scenarios:**

The picture is clear



Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Outdoor fire access routes

Dim-light and low-light environment at night

2.4.9 Fire Extinguisher Location Detection

①**Description:**It identifies whether fire extinguishers are missing in a designated area. If no fire extinguishers are detected, it immediately triggers an alarm and notifies the management staff.

②**Camera Requirements:**The resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, glare, and nighttime infrared shall be avoided. The recognition distance shall be less than 30 meters, and the features of fire extinguishers shall be clear and unobstructed.

③**Application Scenarios:**It is applicable to scenarios such as gas stations, office buildings, and chemical plants

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

Fire extinguishers are placed in visible locations

Areas where fire extinguishers must be placed

⑥**The algorithm is not applicable to scenarios:**

Areas where fire extinguishers are not required to be placed

Dark and low-light scenarios at night

2.4.10 Water gauge water level measurement

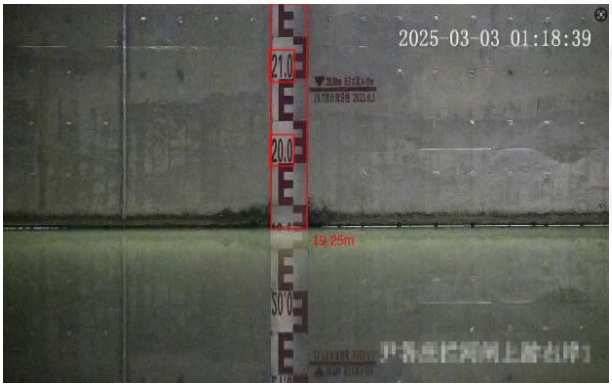
①**Description:**It detects the water level reading of the staff gauge in the reservoir.

②**Camera Requirements:**The resolution shall not be lower than 1080P. Light conditions such as back-lighting, strong light, low light, and glare shall be avoided. The recognition distance shall be less than 20 meters, and the features of the water gauge shall be clear and unobstructed.

③**Application Scenarios:**Reservoirs, water gauge points at flood control points, etc.

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**



The water gauge scale is clearly captured in the image

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

An overly tilted water gauge

A water gauge whose scale cannot be clearly seen

Note: Not all water gauge specifications are recognizable. Before using this algorithm, please consult our technical staff regarding the water gauge specifications*

2.4.11 Floating Object Detection

①**Description:**It identifies floating objects on the water surface (such as garbage, oil stains, and algae) through image detection and analysis

②**Camera Requirements:**The resolution shall not be lower than 1080p, and it shall support waterproof and anti-fog design; the installation height shall be appropriate to avoid interference from water surface reflection; a fill light or infrared device shall be equipped to ensure nighttime monitoring

③**Application Scenarios**:It is applicable to public areas requiring water pollution monitoring, such as urban rivers, reservoirs, and lakes

④**Example of image detection:**

⑤**Algorithm recommendation usage scenarios:**

The monitor picture is clear

Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

The video angle range is too wild

Dark and lake surface reflection scenarios

Note: There are significant differences between rivers. It is expected that on-site river data will need to be collected for scenario-specific algorithm optimization.

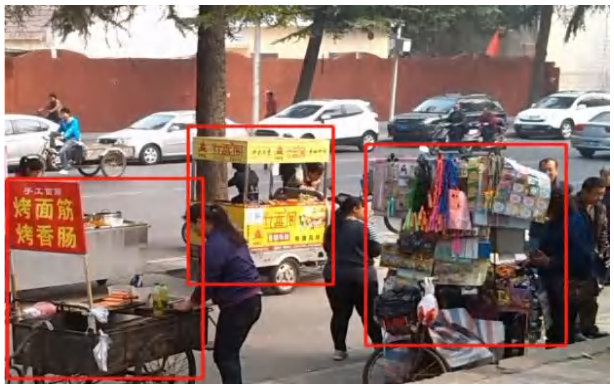
2.4.12 Unlicensed Street Vendors detection

①**Description**:It detects unlicensed vendors and regulates market order.

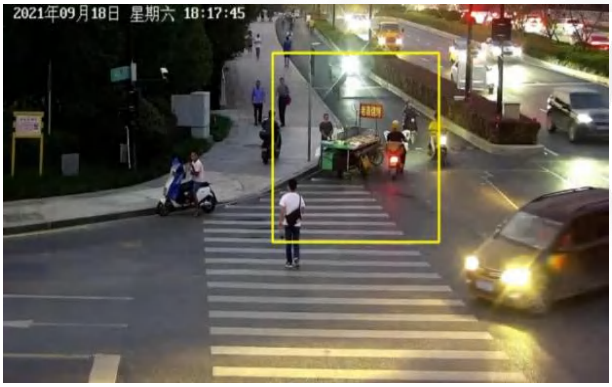
②**Camera Requirements:**The resolution shall not be lower than 1080p. Light conditions such as backlight, strong light, low light, reflection, and night infrared shall be avoided. The recognition distance shall be less than 30 meters to ensure clear identification of individuals and the characteristics of pushcarts

③**Application Scenarios**:Urban streets, market surroundings, etc.

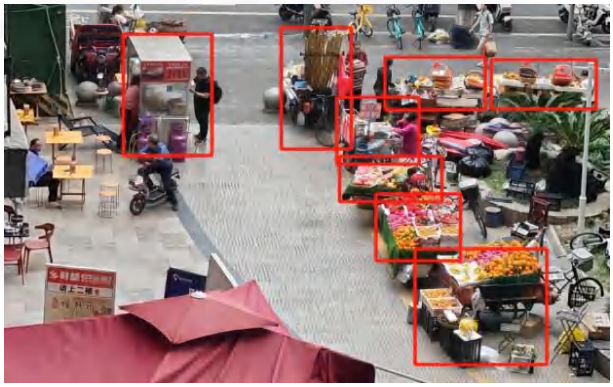
④**Example of image detection:**



⑤**Algorithm recommendation usage scenarios:**



The intersection picture is clear



Good angle and lighting

⑥**The algorithm is not applicable to scenarios:**

Overly chaotic intersection

Excessively wide field of view

3. Frequently Asked Questions

Below are some common issues and their solutions. If the problem persists, please contact the manufacturer’s after-sales engineers for further assistance.

3.1 Unable to Access the Default IP Address When Logging into the System

Issue Description:

When attempting to access the edge computing unit via its default IP address (192.168.1.234) using a web browser, the page fails to load.

Solution:

1. Ensure that the computer and AI edge computing unit are on the same subnet. For example, set the computer’s IP address to 192.168.1.XXX.
2. Check that the network cable is properly connected and that the computer is directly linked to the unit.
3. If access is still unavailable, press and hold the “SEARCH” button on the unit to reset the network settings. This will restore the default IP address (192.168.1.234).
4. Should the issue persist, please contact the manufacturer’s after-sales support team.

3.2 Unable to Access the Unit After Changing the IP Address

Issue Description:

After modifying the IP address of the unit, the management interface cannot be accessed via the new IP.

Solution:

1. Ensure the newly assigned IP address does not conflict with other devices and is reachable within the local network.
2. Confirm that both the computer and the unit are connected to the same local area network (LAN).
3. For dual-network port models, try accessing the unit via the default IP address on the other network port.
4. If the issue persists, press and hold the “SEARCH” button to reset the network settings and reconfigure the IP address
5. Should the problem continue, please contact the manufacturer’s after-sales support team.

3.3 Video Stream Access or Preview Failed

Issue Description:

The video stream cannot be previewed or played after being added.

Solution:

1. Check whether the RTSP/RTMP address is correct. Refer to the format provided by the camera manufacturer (e.g. Hikvision, Dahua, etc.).
2. Ensure that the camera or NVR device is reachable within the network. Use VLC player to test the RTSP stream—copy the stream address into the player to verify playback.
3. Should the issue persist, please contact the manufacturer’s after-sales support team.

3.4 Inaccurate Algorithm Detection

Issue Description:

After assigning an algorithm, the detection area generates a high rate of false alarms.

Solution:

1. Adjust algorithm parameters as needed—such as minimum target width/height, detection confidence level, and alert interval—to better suit the environment and improve detection accuracy.
2. Ensure the camera resolution meets the minimum requirement (at least 1080p), and adjust the focal length to obtain a clear image where the target is easily distinguishable by the human eye.
3. If the issue persists despite these adjustments, please contact the manufacturer's support engineers to collect data for algorithm optimisation and updates to enhance performance.
4. Should the issue persist, please contact the manufacturer's after-sales support team.

3.5 How to Collect Data for Algorithm Optimisation

Issue Description:

Detection accuracy is insufficient, and algorithm optimisation via data collection is required.

Solution:

1. Collect raw images for training: Go to Platform Integration → Cloud Platform Settings and enable Upload Alarm Original Image. Once enabled, each alarm event will save the corresponding raw image.
2. In the Image Database section, locate the relevant alarm images for the algorithm, select them, and click Export Original Image.
3. After export, open the images to verify—they should not contain any detection overlays. These clean images are used for algorithm training and optimisation. Package and send them to the manufacturer's technical team for further development.
4. Please ensure that the exported images do not involve any legal or privacy concerns.

3.6 No Sound from Voice Alarm Function

Issue Description:

When an alarm event occurs, the system does not emit a voice prompt.

Solution:

1. Ensure that the speaker of the computer or external audio device is turned on and the volume is set appropriately.
2. Check whether the voice alarm function is disabled in the system settings.
3. If using a custom alarm sound, confirm that the uploaded MP3 file is in the correct format and has been successfully deployed to the node device.
4. Should the issue persist, please contact the manufacturer's after-sales support team.

3.7 Alarm Event Images Disappear After Refreshing Homepage

Issue Description:

After configuring the algorithm, alarm event images briefly appear on the homepage, but disappear after refreshing. The images also cannot be found in the image database.

Solution:

1. By default, the system only displays image-based alarm events from the past six months. Please check whether the system time is set correctly. If not, update the system time and then return to observe the homepage and image library.
2. Should the issue persist, please contact the manufacturer's after-sales support team

3.8 Image Push Failure

Issue Description:

After configuring the image push function, the receiving end does not receive alarm event images.

Solution:

1. Ensure the recipient's URL address is entered correctly and is accessible.
2. Verify that the IP address configuration for the push network segment is correct—pay particular attention if using a dual-network-port device.
3. Confirm that the receiving server is capable of parsing JSON-formatted data.
4. Check whether the assigned network segment IP and DNS resolution are functioning correctly.
5. Should the issue persist, please contact the manufacturer's after-sales support team

3.9 IP Column Fails to Broadcast Alarm Audio

Issue Description:

After configuring the IP column, alarm event audio is not broadcast through the device.

Solution:

1. Ensure the IP column is a manufacturer-recommended model and that the software version matches that provided at the time of purchase.
2. Confirm that the IP column and the edge device are on the same local network, and that the IP address of the column is correctly entered into the system.
3. Make sure the maximum volume setting of the IP column has been properly adjusted via the terminal configuration software.
4. Check whether the IP column has been correctly linked to the video channel and assigned to the corresponding alarm algorithm
5. Should the issue persist, please contact the manufacturer's after-sales support team.

3.10 System Upgrade Failure

Issue Description:

After importing the upgrade package, the system indicates that the upgrade has completed, but upon reopening, the system has not successfully updated to the latest version.

Solution:

1. Ensure that the device has sufficient storage space to complete the upgrade, and check whether any failure messages were displayed during the process.

2. Verify that the device software version and the algorithm repository version match the intended upgrade version number.
3. If the version number shown after the upgrade appears correct but the interface does not reflect the latest features, try refreshing the page using F5 or accessing the system through a different browser.
4. Should the issue persist, please contact the manufacturer's after-sales support team.

3.11 How to Check the Software Version

Issue Description:

How to view the system software version and the algorithm package version.

Solution:

1. Software Version: Go to Device Management → Version.
2. Algorithm Package Version: Go to Device Management → Algorithm Repository, the version number is displayed in the bottom-right corner.

3.12 What to Do If Alarm Events Suddenly Stop During Use

Issue Description:

After the system has been running for some time, no alarm events are being triggered or pushed.

Solution:

1. Check whether the system time is set correctly.
2. Verify that the video stream preview is functioning properly.
3. Confirm that the storage is not full and is correctly set to overwrite when full.
4. Try restarting the system and monitor the status. If alarms resume temporarily but the issue recurs after some time, please contact the manufacturer's technical support for further assistance.

Attachment 1：Hikvision and DaHua RTSP module

◆**Hikvision:**

1. new format

(1)main stream:

rtsp://**[username]**:**[password]**@**[ip]**:554/streaming/channels/**[channel number]**01

(2)sub stream:

rtsp://**[username]**:**[password]**@**[ip]**:554/streaming/channels/**[channel number]**02

(3)Example:

rtsp://admin:12345@192.168.1.222:554/streaming/channels/101

2.old format:

(1)main stream:

rtsp://**[username]**:**[password]**@**[ip]**:554/**[h264/h265]**/ch1/main/av_stream

(2)sub stream：

rtsp://**[username]**:**[password]**@**[ip]**:554/**[h264/h265]**/ch1/sub/av_stream

(3)Example:

rtsp://admin:12345@192.168.1.222:554/h264/ch1/main/av_stream

◆**Dahua**:

rtsp://admin:[password]@[IP]:554/cam/realmonitor?channel=1&subtype=0

Attachment 2：API Interface Document

Edge Intelligence Collection and Analysis System API V1.0.9.html