

AI Box Algorithms

Kyla's AI box has 24 built-in AI algorithms, suitable for multiple scenarios. Additionally, we offer numerous premium algorithms and customization options to meet specific needs.

Inclusive Algorithms

1. Face Recognition
2. Smoking Detection
3. Intrusion Detection
4. Loitering Detection
5. Line Crossing Detection
6. People Counting
7. Fighting Detection
8. Climbing Detection
9. Fence Climbing Detection
10. Fall Detection
11. Absence from Duty Detection
12. Sleep on Duty Detection
13. Mobile Phone Calling Detection
14. Mask Detection
15. Passageway Obstruction Detection
16. Safety Helmet Detection
17. Reflective Vest Detection
18. Bare Arms Detection
19. Uniform Detection
20. Fire and Smoke Detection
21. Electric Bike Detection
22. Illegal Parking Detection
23. License Plate Recognition (China)
24. Small Animal Detection (mouse, cat, dog)

Exclusive Algorithms

1. Crowd Detection
2. Overcrowding Detection
3. Fire Extinguisher Missing Detection
4. Gun and Knife Detection
5. Lift Hold-Up Detection
6. Waste Bin Lid Open Detection
7. Street Garbage Detection
8. High Rise Littering Detection
9. Supermarket Cart Detection
10. Leakage Detection
11. Conveyor Fault Detection
12. Unauthorized Personnel and Machinery Access Restriction
13. Proximity to Crane Equipment Detection
14. Heavy Machinery Recognition
15. Customer Flow Statistics
16. Vehicle Info Recognition
17. Vehicle Congestion Detection
18. Vehicle Counting
19. Vehicle Speeding Detection
20. Vehicle wrong-way detection
21. EV Charger Cable Detection
22. Driver Fatigue Detection
23. Distracted Driving Detection

More algorithms under developing...

AI Box Solutions by Industry

Kyla's AI solutions encompass a comprehensive range of intelligent technologies designed to enhance various sectors. The **BLUE** are inclusive functions.



Smart Building

- Facial Recognition
- Smoking Detection
- Fall Detection
- Fire and Smoke Detection
- Line Crossing Detection
- Loitering Detection
- Intrusion Detection
- Small Animal Detection
- Fire and Smoke Detection
- Fire Extinguisher Missing Detection
- Gun and Knife Detection
- Waste Bin Lid Detection
- Vehicle Info Recognition
- Lift Hold-Up Detection
- Waste Bin Lid Open Detection
- Street Garbage Detection
- High Rise Littering Detection
- Supermarket Cart Detection



Smart Factory

- Facial Recognition
- Absence from Duty Detection
- Smoking and Phone Call Detection
- Intrusion Detection
- Line Crossing Detection
- Fighting Detection
- Sleep on Duty Detection
- Passageway Obstruction Detection
- Bare Arms Detection
- Small Animal Detection
- Mask Detection
- Fire and Smoke Detection
- Gun and Knife Detection
- Fire Extinguisher Missing Detection
- Waste Bin Lid Detection
- Leakage Detection
- Conveyor Fault Detection



Smart Campus

- Facial Recognition
- Smoking Detection
- Fall Detection
- Fire and Smoke Detection
- Line Crossing Detection
- Loitering Detection
- Intrusion Detection
- Fighting Detection
- Climbing Detection
- Fire Extinguisher Missing Detection
- Gun and Knife Detection
- Waste Bin Lid Detection
- Vehicle Info Recognition



Smart Construction Site

- Facial Recognition
- Smoking Detection
- Fall Detection
- Fire and Smoke Detection
- Line Crossing Detection
- PPE Non-Compliance Detection
- Unauthorized Personnel and Machinery Access Restriction
- Proximity to Crane Equipment Detection
- Heavy Machinery Recognition



Smart Traffic

- Illegal Parking Detection
- Vehicle Info Recognition
- Vehicle Congestion Detection
- Vehicle Counting
- Vehicle Speeding Detection
- Vehicle wrong-way detection
- Driver Fatigue Detection
- Distracted Driving Detection
- EV Charger Cable Detection



Smart Retail

- Facial Recognition
- Smoking Detection
- Fall Detection
- Fire and Smoke Detection
- People Counting
- Fall Detection
- Fighting detection
- Fire Extinguisher Missing Detection
- Crowd Detection
- Customer Flow Statistics

AI Box Algorithms Explanations

Inclusive Algorithms

1. **Face Recognition:** Identifies and verifies individuals by analyzing facial features in real-time.
2. **Smoking Detection:** Detects individuals smoking in restricted areas using video analysis.
3. **Intrusion Detection:** Monitors for unauthorized entry into secure zones.
4. **Loitering Detection:** Identifies individuals lingering in designated areas for suspicious periods.
5. **Line Crossing Detection:** Triggers alerts when a person or object crosses a virtual boundary.
6. **People Counting:** Accurately counts the number of people passing through a specified area.
7. **Fighting Detection:** Detects physical altercations between individuals using behavior analysis.
8. **Climbing Detection:** Identifies attempts to climb over barriers or structures.
9. **Fence Climbing Detection:** Specifically monitors for climbing activity on fences.
10. **Fall Detection:** Detects when a person falls and may need assistance.
11. **Absence from Duty Detection:** Monitors for personnel leaving their assigned posts.
12. **Sleep on Duty Detection:** Detects when employees are sleeping during work hours.
13. **Mobile Phone Calling Detection:** Identifies unauthorized use of mobile phones.
14. **Mask Detection:** Ensures compliance by detecting whether individuals are wearing masks.
15. **Passageway Obstruction Detection:** Detects objects blocking important passageways.
16. **Safety Helmet Detection:** Ensures workers are wearing safety helmets in required zones.
17. **Reflective Vest Detection:** Identifies if workers are wearing required reflective vests.
18. **Bare Arms Detection:** Ensures employees are not violating safety protocols by having bare arms.
19. **Uniform Detection:** Recognizes specific types of uniforms to ensure compliance with dress codes.
20. **Fire and Smoke Detection:** Detects the presence of fire and smoke in monitored areas.
21. **Electric Bike Detection:** Identifies electric bikes entering prohibited areas.
22. **Illegal Parking Detection:** Detects vehicles parked in unauthorized zones.
23. **License Plate Recognition (China):** Reads and identifies China vehicle license plates.
24. **Small Animal Detection (mouse, cat, dog):** Detects small animals to prevent contamination or damage.

AI Box Algorithms Explanations

Exclusive Algorithms

1. **Crowd Detection:** Identifies and monitors the presence of large groups of people in a specified area.
2. **Overcrowding Detection:** Alerts when the number of people in an area exceeds a predefined threshold.
3. **Fire Extinguisher Missing Detection:** Notifies when a fire extinguisher is removed or missing from its designated location.
4. **Gun and Knife Detection:** Identifies the presence of firearms and knives in surveillance footage.
5. **Lift Hold Up Detection:** Alerts when an elevator is being held open for an extended period.
6. **Waste Bin Lid Open Detection:** Identifies when the lid of a waste bin is left open.
7. **Street Garbage Detection:** detects garbage and debris on streets and public areas.
8. **High Rise Littering Detection:** identifies objects being thrown from high-rise buildings.
9. **Supermarket Cart Detection:** monitors the presence and movement of shopping carts in stores.
10. **Leakage Detection:** identifies liquid leaks in industrial and commercial environments.
11. **Conveyor Fault Detection:** monitors conveyor belts for malfunctions or stoppages
12. **Unauthorized Personnel and Machinery Access Restriction:** Alerts when unauthorized individuals or machinery access restricted areas.
13. **Proximity to Crane Equipment Detection:** Ensures safe distances are maintained around crane equipment.
14. **Heavy Machinery Recognition:** Identifies and monitors the use of heavy machinery on-site.
15. **Customer Flow Statistics:** Tracks and analyzes the movement and behavior of customers in retail.
16. **Vehicle Info Recognition:** Identifies and logs details such as license plates, vehicle types and color.
17. **Vehicle Congestion Detection:** Monitors and alerts for traffic congestion in monitored areas.
18. **Vehicle Counting:** Accurately counts the number of vehicles passing through a designated area.
19. **Vehicle Speeding Detection:** Monitors and alerts for vehicles exceeding speed limits.
20. **Vehicle Wrong Way Detection:** Alerts when a vehicle is traveling in the wrong direction.
21. **EV Charger Cable Detection:** Ensures the proper placement of electric vehicle charger cables.
22. **Driver Fatigue Detection:** Monitors driver behavior for signs of fatigue and drowsiness.
23. **Distracted Driving Detection:** Identifies behaviors indicating a driver is not paying full attention to the road.