KytraTech

AI-Enabled Dehavioral
Detection System
Thinux-AI Surveillance

Introduction

The AI-powered behavioral detection system is purpose-built to address contemporary security needs by accurately identifying and analyzing human actions in real time. Utilizing state-of-the-art image recognition and behavior analysis, the system ensures precise, responsive monitoring for diverse environments.

From recognizing unusual behaviors and hazardous actions to issuing timely alerts, the system enhances safety while enabling faster incident management. Its comprehensive capabilities include behavior-specific event detection, seamless data integration, and detailed reporting, providing an all-in-one solution for proactive surveillance and risk mitigation.

Core Functionalities

1 Detection of Fallen Individuals
- Identifies monitored zones and detects individuals within them.
- Detects fall incidents and issues alerts via screen or speaker.

2 Detection of Aggressive Behavior
- Monitors zones to detect individuals.
- Recognizes physical altercations and provides immediate warnings.

3 Detection of Fire or Smoke in Confined Areas
- Monitors designated zones.
- Detects fire or smoke and alerts via screen or speaker.

4 Detecting Suicide by Wrapping a Rope Around the Neck
- Identifies the surveillance zone and detects individuals within it.
- Recognizes suicidal behavior and promptly issues alerts via screen or speaker.

5 Detection of Suicide Attempts in Water Areas
- Monitors areas surrounding water bodies.
- Detects drowning attempts and triggers alerts.

6 Detection of After-Hours Movement
- Monitors designated areas and identifies unauthorized movement after permitted hours.
- Issues alerts via screen or speaker for inappropriate activity.

7 Prolonged Presence Monitoring
- Tracks individuals remaining in specified zones beyond a predetermined duration.
- Issues warnings when extended presence is detected.

8 Detection of Camera Obstruction
- Analyzes camera footage for signs of obstruction or tampering.
- Issues alerts to ensure continuous monitoring.

9 Detection of Climbing Activity
- Monitors designated areas for climbing attempts.
- Alerts security via screen or speaker when climbing is detected.

10 People Counting in Specific Zones
- Detects the number of people in monitored areas.
- Displays the count or stores it in the database.

11 Intelligent storage
- Extract information such as gender and clothing color of persons appearing in the frame and store it.
- Extract time frames containing conversations.

Alert Functionality

▪ **Audio Alerts:** Broadcast warnings through a speaker system.

▪ **Visual Alerts:** Display real-time notifications on monitoring screens.

▪ **Physical Alerts**: Trigger flashing lights and sirens for immediate attention.

Management Features

1 Camera Monitoring

- ▪ Supports simultaneous monitoring of multiple cameras with real-time tracking.
- ▪ Allows configuration and adjustment of cameras as needed.

2 Maintain detailed records of surveillance location data and detail information (such as objects ...) as metadata

3 Historical Data Lookup

- ▪ Stores detection events in the database.
- ▪ Enables historical searches by time, event type, camera name, camera id, location name, location id, location type ...
- ▪ Search by specific features or facial images of persons (Intelligent search)
- ▪ Search video segments containing conversations (Intelligent search)

4 Exportable Reports

- ▪ Supports the generation of image or text-based reports for convenience in printing or sharing.

5 Screen Layout Management

- ▪ Enables customizable monitoring layouts to efficiently display multiple camera feeds.
- ▪ Offers flexible layout configurations to suit different monitoring needs.

6 Multi-Screen Viewing

- ▪ Supports viewing camera feeds across multiple screens for enhanced surveillance coverage.

7 User Account Permissions

- ▪ Provides role-based account management for controlling access to system features.
- ▪ Ensures secure and organized user privileges for different levels of operation.

8 Behavioral Statistics Dashboard

- ▪ Generates detailed behavior analysis charts and graphs.
- ▪ Provides statistical insights by day, week, month, and year to support trend analysis and decision-making.

Advantages

▪ **High Automation:** Reduces the workload of manual monitoring.

▪ **Exceptional Accuracy:** AI and deep learning technologies deliver reliable recognition even in complex scenarios.

▪ **Fast Response:** Dedicated hardware ensures swift detection and alerting.

▪ **Flexible Expansion:** The system easily integrates and upgrades with new hardware and software.

▪ **Low False Alarms:** On-device learning models significantly reduce the occurrence of false alerts.

Hardware Requirements

▪ **Cameras:** Minimum resolution of 1920x1080, with a frame rate of ≥ 25 fps.

▪ **Processing Unit:** A dedicated GPU with processing power of ≥ 3 TFLOPS per camera.

Empowering Security with AI

Experience the next level of surveillance with a system built for accuracy, reliability, and scalability. Contact us today to learn how our technology can transform your security operations.