User Manual

Overview

Thank you for choosing Cat's Eye Bullying Detection System, an AI-driven solution designed to create a safe school environment for all students. This user manual will guide you through the process of integrating and using Cat's Eye in your school. Our mission is to provide a safe space for children, and we believe that timely intervention is crucial in preventing bullying incidents. Let's work together to create a world free of violence.

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1.Introduction

1.1 Purpose of the Manual

This user manual is designed to provide comprehensive instructions and guidelines for using Cat's Eye, an AI-driven bullying detection system. The manual aims to assist school staff members in

understanding the functionalities of Cat's Eye, its installation process, and how to effectively utilize it to create a safe school environment.

1.2 About Cat's Eye

Cat's Eye bullying detection System utilises artificial intelligence to analyse the input from CCTV cameras and microphones in schools. It is trained to detect physical and verbal bullying incidents, enabling timely intervention by sending alerts to relevant school staff members. By integrating Cat's Eye into your existing surveillance system, you can enhance the safety measures within your school.

1.3 Mission and Vision

Cat's Eye's mission is to create a safe space for children in schools by actively preventing bullying incidents. The team behind Cat's Eye believes that it is their duty as human beings to address the important problem of bullying that affects the lives of many. The AI model has been developed and trained with utmost care to ensure its meaningful impact on bullying prevention. The vision of the team is to create a world free of violence.

2. System Overview

2.1 System Description

Cat's Eye is an AI-driven bullying detection system that integrates with existing CCTV cameras and microphones in schools. It analyses the input data from these devices in real-time to identify physical and verbal bullying incidents. The system uses advanced machine learning algorithms to detect patterns associated with bullying behaviours and promptly alerts the appropriate school staff members for intervention.

2.2 Key Features

- Real-time monitoring of CCTV camera footage and audio recordings for bullying incidents.
- Accurate detection of both physical and verbal bullying behaviours.
- Automated alert system to notify relevant school staff members.
- Integration with existing infrastructure for seamless operation.
- Customisable settings to adjust sensitivity and alert preferences.

2.3 Integration Requirements

To utilise Cat's Eye effectively, the following integration requirements must be met:

- CCTV cameras and microphones: Cat's Eye requires access to existing CCTV cameras and microphones on the school premises.
- Network connectivity: The system needs a stable internet connection to transmit data and alerts.

- Compatible hardware: Ensure that the hardware infrastructure meets the system's minimum requirements (detailed in the technical requirement).

3.Technical Requirements

Before proceeding with the setup and installation process, ensure that your system meets the following technical requirements:

a. CCTV Cameras: Your school should have CCTV cameras installed in key locations within the premises, covering areas where bullying incidents may occur.

b. Microphones: The surveillance system should include microphones capable of capturing clear and intelligible audio.

c. Network Connectivity: Ensure your surveillance system is connected to a stable network with sufficient bandwidth to transmit video and audio data.

d. Cat's Eye Interface: You should have access to the Cat's Eye AI model interface, either through a web-based dashboard or an API.

e. Hardware Requirements:

CPU: Intel Core i9-12900K or equivalent processor.

RAM: Minimum 64 GB DDR4 RAM clocked at 3200 MHz for optimal performance.

GPU: NVIDIA GeForce RTX 3090 or equivalent graphics card for efficient AI processing.

Storage: Minimum 2 TB M.2 NVMe SSD for storing and processing data.

Ensure that your system meets these hardware requirements to ensure optimal performance and efficient video and audio data processing by the Cat's Eye Bullying Detection System.

4.System Setup and Installation

In this section, we will guide you through the process of setting up and installing Cat's Eye in your school environment.

4.1 Hardware Requirements

Ensure that your system meets the specified hardware requirements mentioned in Section 2 of this manual.

4.2 Software Installation

To install Cat's Eye, follow these steps:

> Step 1: Download the Cat's Eye software package from the official website or obtain it from your authorised vendor.

> Step 2: Run the installation file and follow the on-screen instructions to install the software on your designated server or computer.

> Step 3: Once the installation is complete, proceed to the licensing and activation step.

4.3 Licensing and Activation

To activate Cat's Eye, follow these steps:

> Step 1: Contact Cat's Eye customer support or your authorized vendor to obtain a valid license key.

> Step 2: Launch the Cat's Eye software and navigate to the licensing section.

> Step 3: Enter the license key provided to activate Cat's Eye. Follow the on-screen instructions to complete the activation process.

5.Integration with Existing Surveillance Infrastructure

In this section, we will guide you through the process of integrating Cat's Eye with your existing surveillance infrastructure.

5.1 Camera and Microphone Configuration:

To configure your cameras and microphones for integration with Cat's Eye, follow these steps:

> Step 1: Assess your existing infrastructure and identify the cameras and microphones covering areas where bullying incidents occur.

> Step 2: Configure each CCTV camera to meet the optimal settings for video quality, including resolution, frame rate, and compression settings.

> Step 3: Adjust the microphone settings to ensure clear and discernible audio quality, adjusting sensitivity levels as necessary.

5.2 Network Connectivity Setup:

To establish network connectivity for Cat's Eye integration, follow these steps:

Step 1: Determine the network requirements for transmitting video and audio data from the CCTV cameras and microphones to the Cat's Eye AI model interface.

Step 2: Configure network settings on the surveillance system to ensure proper connectivity with the Cat's Eye interface. This may involve configuring IP addresses, enabling RTSP streaming, or utilizing other compatible network protocols.

5.3 Cat's Eye AI Model Interface Integration:

To integrate the Cat's Eye AI model interface with your surveillance system, follow these steps:

Step 1: Access the Cat's Eye AI model interface by logging into the web-based dashboard or setting up the API connection.

Step 2: Connect the output of the CCTV cameras and microphones to the Cat's Eye AI model interface using the provided integration methods. This may include providing IP addresses or RTSP stream URLs for the cameras and microphones.

6.User Interface and Configuration

This section will explore the Cat's Eye user interface and guide you through the configuration process.

6.1 Accessing the Cat's Eye Interface:

To access the Cat's Eye AI model interface, follow these steps:

Step 1: Launch a web browser on your computer.

Step 2: Enter the URL or IP address provided to you for accessing the Cat's Eye interface.

Step 3: Log in using the credentials provided during the installation or registration.

6.2 User Roles and Permissions:

Cat's Eye provides user roles and permissions to manage access and control within the system. The available user roles may include administrators, operators, and reviewers. Contact your system administrator to assign appropriate user roles and permissions based on your responsibilities and requirements.

6.3 System Configuration:

Cat's Eye allows for system-level configuration to customize settings according to your school's specific needs. Consult the Cat's Eye administration guide for detailed instructions on system

configuration, including sensitivity thresholds, alert notification preferences, and data storage settings.

6.4 Cat's Eye Dashboard:

6.4.1 Dashboard Overview

The Cat's Eye dashboard is the central hub of the system's user interface. It provides an overview of real-time monitoring, alerts, and system status. The dashboard offers a user-friendly and intuitive interface, enabling school staff members to access important information at a glance.

6.4.2 Navigation and Layout

Users are presented with the dashboard upon logging in to Cat's Eye. The layout typically consists of the following components:

- Navigation Menu: A horizontal or vertical menu that allows users to navigate between different sections and features of the system.

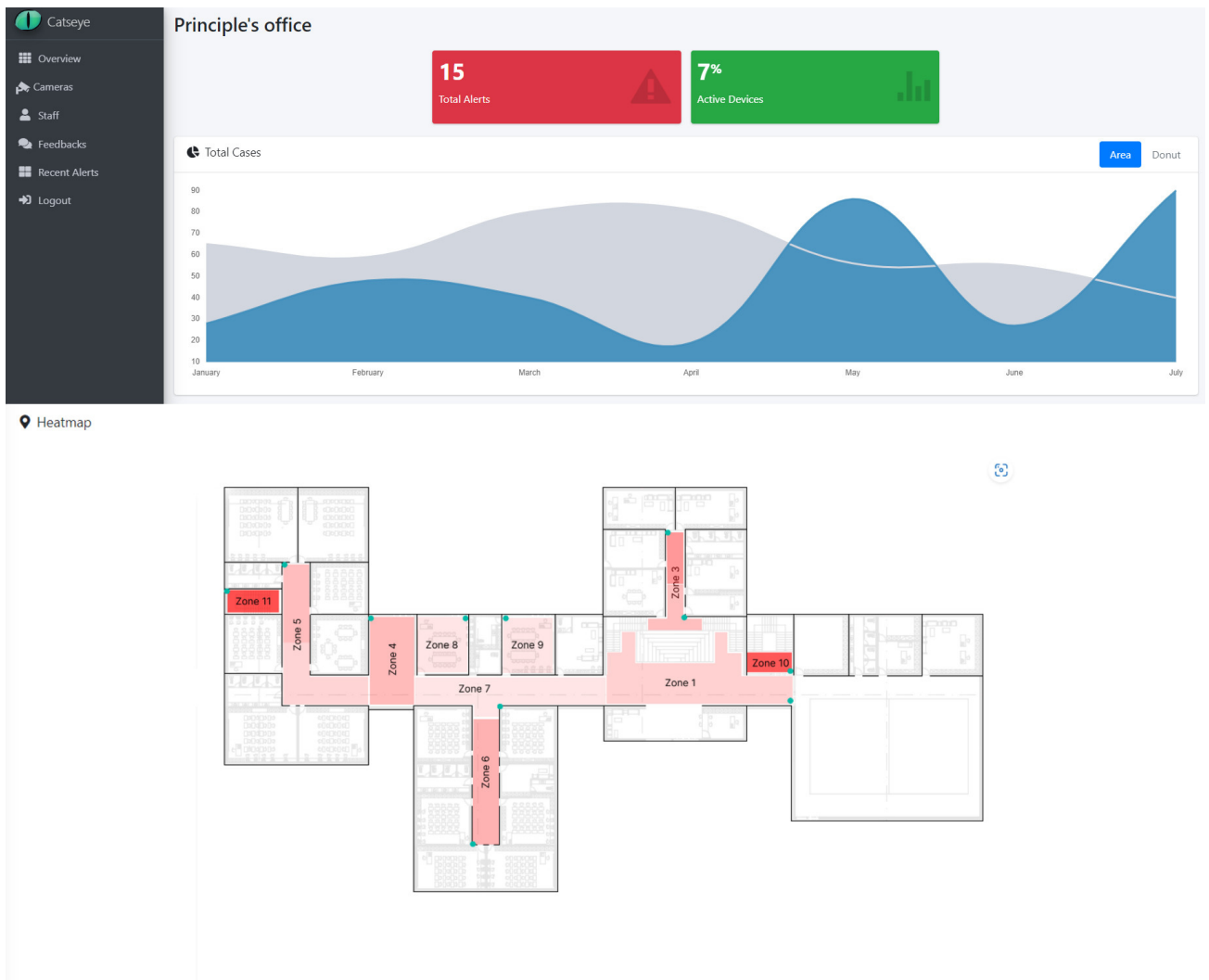Fig 1. Navigation System and Analytics

- System Status: A section displaying the overall system status, including connection status, number of cameras and microphones connected, and any system notifications or alerts.
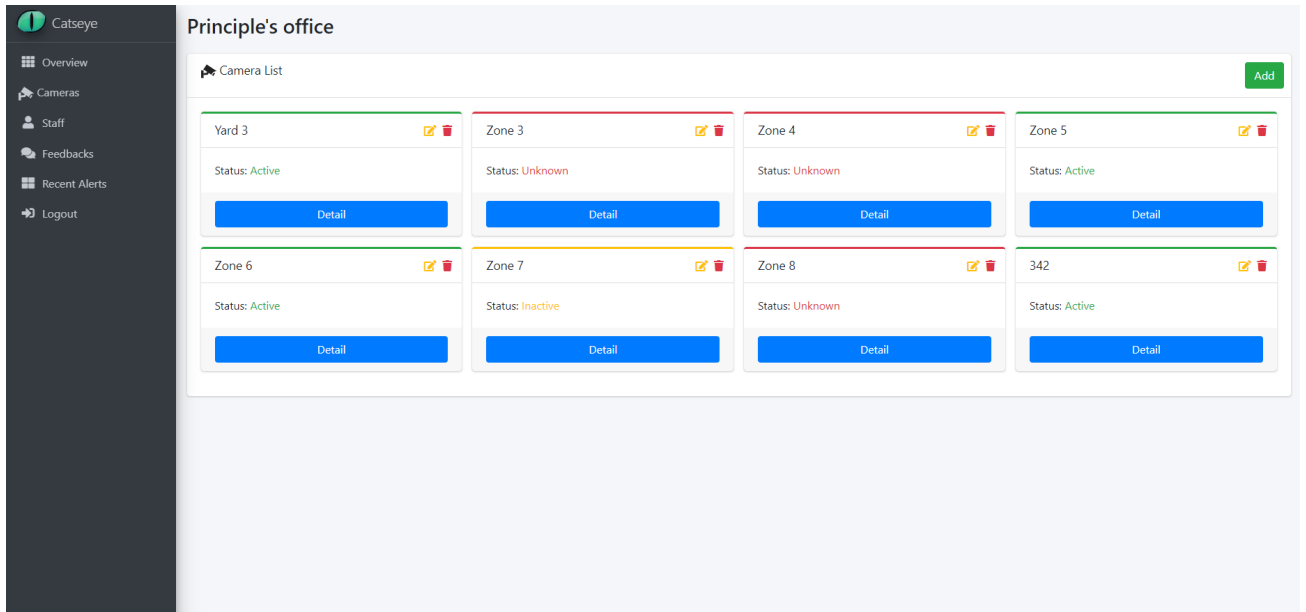

Fig 2. Systems Status

- Real-time Monitoring: A live feed of CCTV camera footage, which can be displayed in a grid or individually, depending on the configuration. Users can view the camera feed and monitor activities in real time.
- Audio Input: If audio capture is enabled, an audio waveform or visual representation of the current audio input may be displayed, allowing users to monitor sounds in real-time.
- Alert Log: A log or notification panel that provides a detailed list of bullying incidents detected by the system. Each alert typically includes relevant information, such as the incident's time, location, description, and severity level.
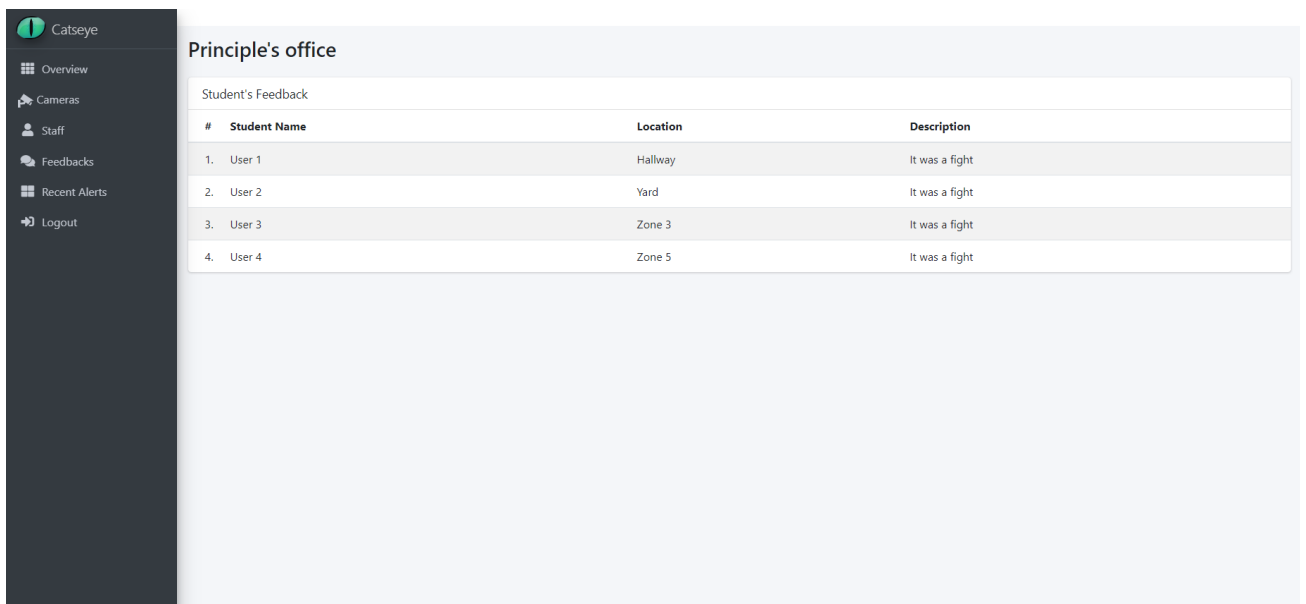
Fig 3. Alert Log, this section provides the location of the incident and type of bullying

- System Settings: Accessible through a dedicated settings icon or menu, this section allows users to configure various system settings, such as sensitivity levels, notification preferences, and user management.

6.4.3 Interacting with the Dashboard

The Cat's Eye dashboard allows users to interact with the system and perform various actions. Here are some common functionalities:

- Camera Selection: If multiple cameras are integrated, users can select a specific camera feed to view by clicking on the corresponding camera tile or using a drop-down menu.
- Playback Controls: In some cases, the system may provide playback controls to review recorded footage or audio from specific incidents. These controls typically include play, pause, rewind, and fast-forward buttons.
- Alert Handling: When an alert is triggered, users can click on the respective alert in the log to view additional details. This information helps users identify the severity of the incident and determine the appropriate intervention.
- Customization Options: Depending on the system's capabilities, users may have the ability to customize the dashboard layout, adjust display preferences, or configure alert notifications according to their specific requirements.

6.4.4 System Status and Notifications

The dashboard's system status section provides essential information about the health and operation of the Cat's Eye system. This includes:

- Connection Status: Indicates whether the system is properly connected to the network and all required components, such as cameras and microphones.
- Hardware Status: Displays the status of integrated hardware devices, including their availability and functionality.
- Alert Notifications: Real-time notifications of detected bullying incidents or any other system-related notifications.

7. Alert Management and Response

This section covers alert management and response procedures to ensure timely intervention in bullying incidents.

7.1 Alert Notification Setup:

To configure alert notifications, follow these steps:

Step 1: Access the Cat's Eye AI model interface.

Step 2: Navigate to the alert notification settings section.

Step 3: Specify the designated staff members or groups who should receive alert notifications. Configure notification preferences such as email, SMS, or in-app alerts.

7.2 Alert Review and Verification:

Reviewing and verifying the detected bullying incident is crucial when an alert is generated. Follow these steps:

Step 1: Access the Cat's Eye AI model interface.

Step 2: Navigate to the alerts section to view the generated alerts.

Step 3: Review the details of each alert, including video footage, audio recordings, and relevant metadata.

Step 4: Verify the alert and categories it as a confirmed bullying incident or false positive.

7.3 Response and Intervention:

Upon verifying a bullying incident, it is essential to respond promptly. Follow your school's established protocols for intervention, which may involve notifying relevant staff members, contacting the involved parties, and taking appropriate disciplinary actions.

8. System Maintenance and Troubleshooting

In this section, we will cover system maintenance and troubleshooting guidelines to ensure the smooth operation of Cat's Eye.

8.1 Monitoring System Health:

Regularly monitor the Cat's Eye system to ensure its health and performance. Keep an eye on system logs, network connectivity, and resource utilisation to identify any potential issues. Resolve them promptly to maintain the system's optimal functionality.

8.2 Data Management and Storage:

Implement a data management strategy to handle the storage of video and audio recordings captured by Cat's Eye. Ensure sufficient storage capacity is available, and that backup processes are in place to prevent data loss.

8.3 Troubleshooting Common Issues:

Refer to the Cat's Eye Troubleshooting Guide for assistance with common issues. This guide provides step-by-step instructions to resolve potential problems related to network connectivity,

hardware configuration, software settings, and more.

9.Privacy and Security

9.1 Data Privacy

Cat's Eye respects the privacy of individuals and complies with applicable data protection regulations. All recorded data is handled securely and used solely for the purpose of bullying detection. The system employs encryption techniques to safeguard data during transmission and storage. It is important to establish clear guidelines and policies regarding data access and retention in accordance with local laws and regulations.

9.2 Security Measures

Cat's Eye implements various security measures to protect the system and data from unauthorized access:

- ○ User authentication: Each user is required to authenticate with unique credentials to access the system.
- ○ Access control: Role-based access control ensures that users only have access to relevant features and data.
- ○ System monitoring: Regularly and auditing system activities to detect and prevent security breaches.
- ○ Data encryption: All data transmitted and stored by Cat's Eye is encrypted to prevent unauthorized interception.