LibraryRunCatcher

Administrator & Teacher Operational Manual

ⓘ Project Overview

LibraryRunCatcher is a sophisticated behavior monitoring system designed to maintain peace and safety in educational environments. By leveraging computer vision and acoustic analysis, the system identifies disruptive behaviors like running or excessive noise in real-time.

⚡ Real-time Detection

Instant processing of movement and sound data with under 500ms latency.

📷 Visual Evidence

Automatic snapshots captured only when a violation is detected for privacy and accountability.
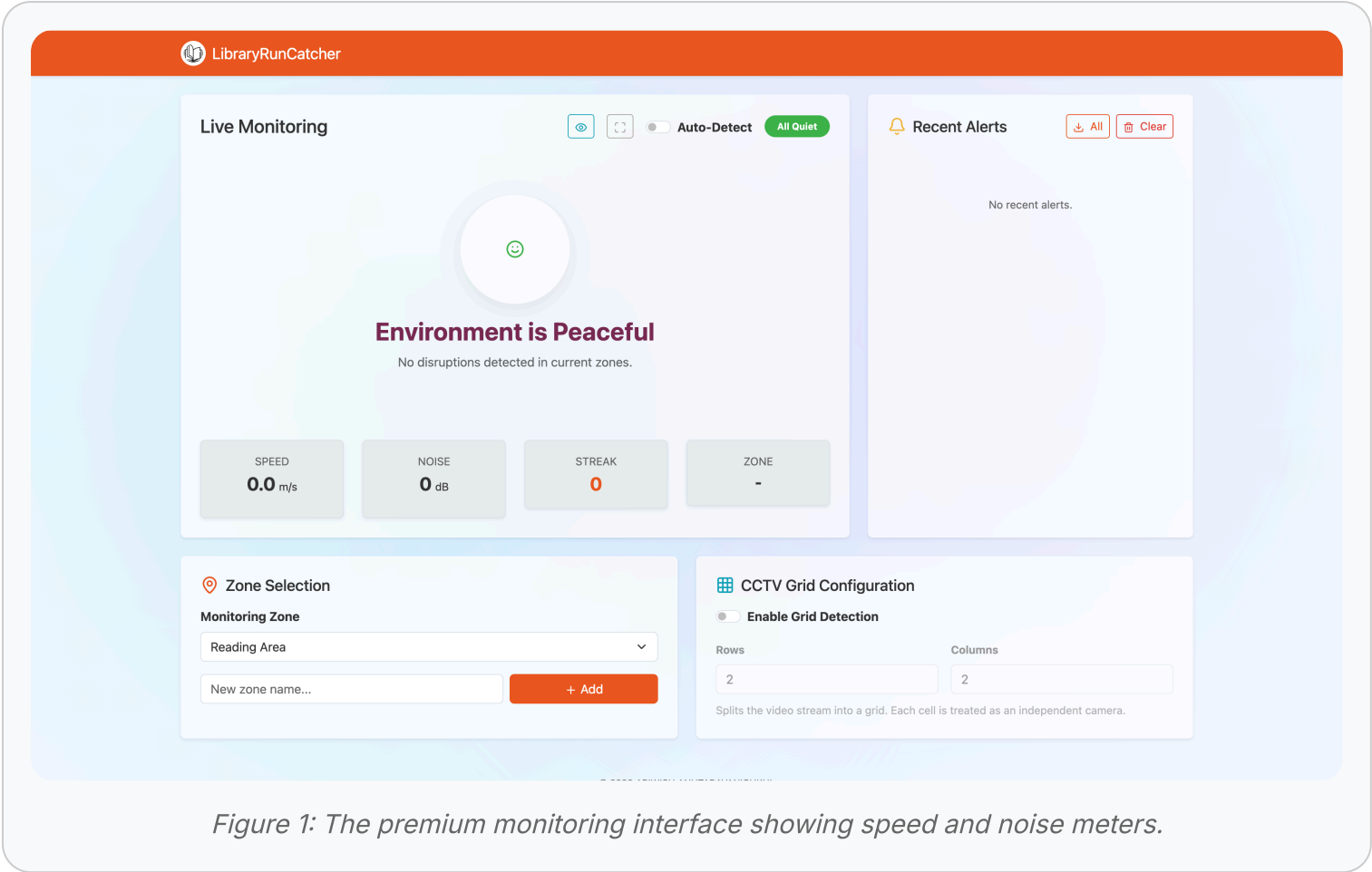
🛡 Privacy First

Uses skeletal pose tracking to avoid continuous video recording.

⊞ The Command Dashboard

The main interface provides at-a-glance monitoring of the entire facility. Use the meters to observe current environmental levels.

Figure 1: The premium monitoring interface showing speed and noise meters.

1 **Auto-Detect Toggle:** Activates the "Quiet Watch" mode.

2 **Speed Meter:** Monitors velocity in meters per second. Red indicates running.

3 **Noise Meter:** Monitors decibel levels. High levels trigger "Loud" alerts.

⊞ CCTV Grid Implementation

The system supports professional CCTV grid layouts. If your video input contains multiple camera feeds, you can split the detection logic across them.
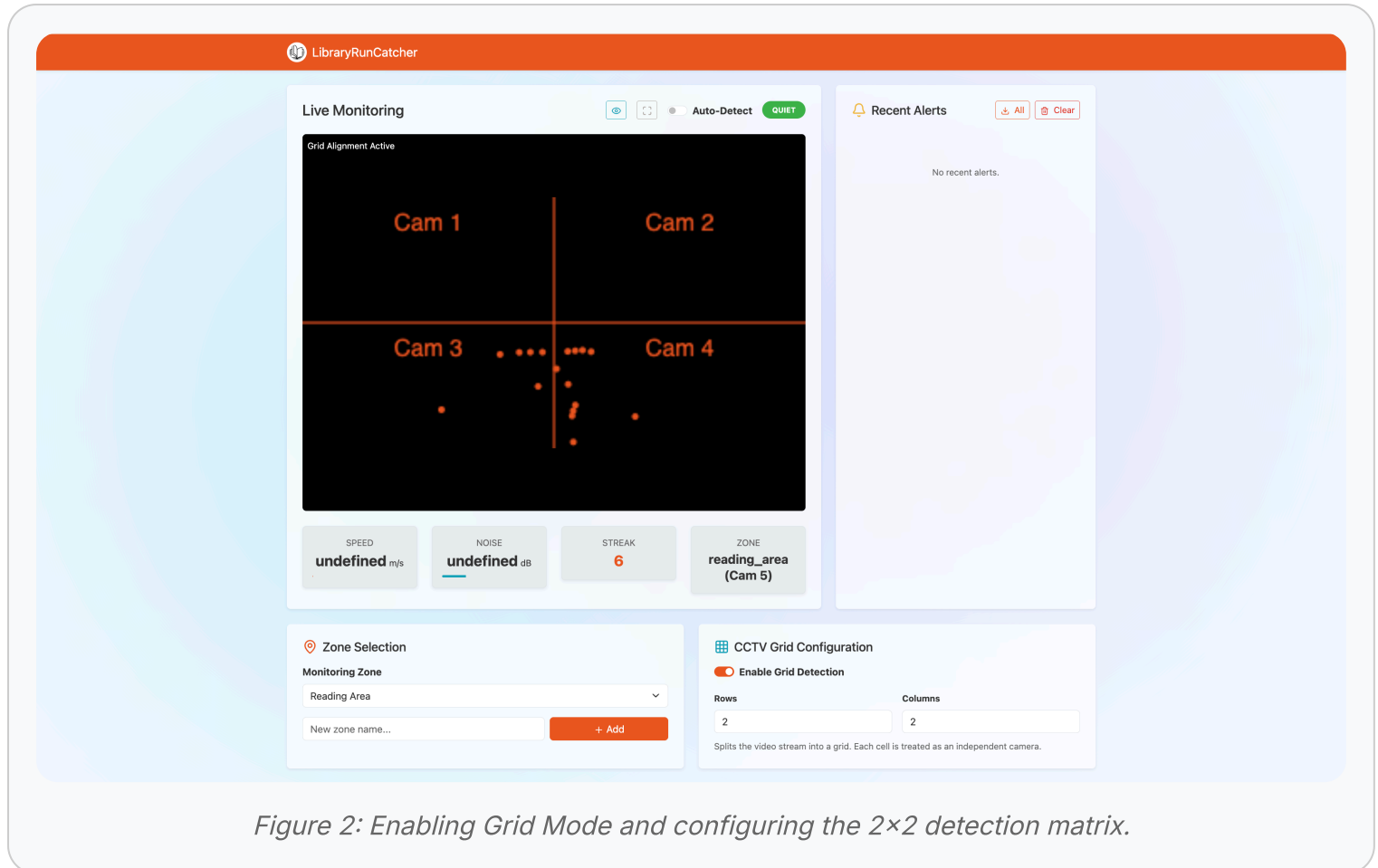

Figure 2: Enabling Grid Mode and configuring the 2×2 detection matrix.

Pro Tip: Click the "Eye" icon 👁 in the dashboard to see the alignment grid. This helps ensure each person is correctly mapped to their respective "Cam ID".

How to Configure:

1. Scroll to **CCTV Grid Configuration**.
2. Toggle **Enable Grid Detection**.
3. Set the number of **Rows** and **Columns** provided by your virtual camera software.
4. The system will now distinguish alerts by specific camera (e.g., "Library Lobby (Cam 4)").

📋 Incident & Evidence Management

When an alert is triggered, it appears instantly in the sidebar. Teachers can review the evidence and generate official reports.

LibraryRunCatcher

Incident Accountability Report

Incident Details

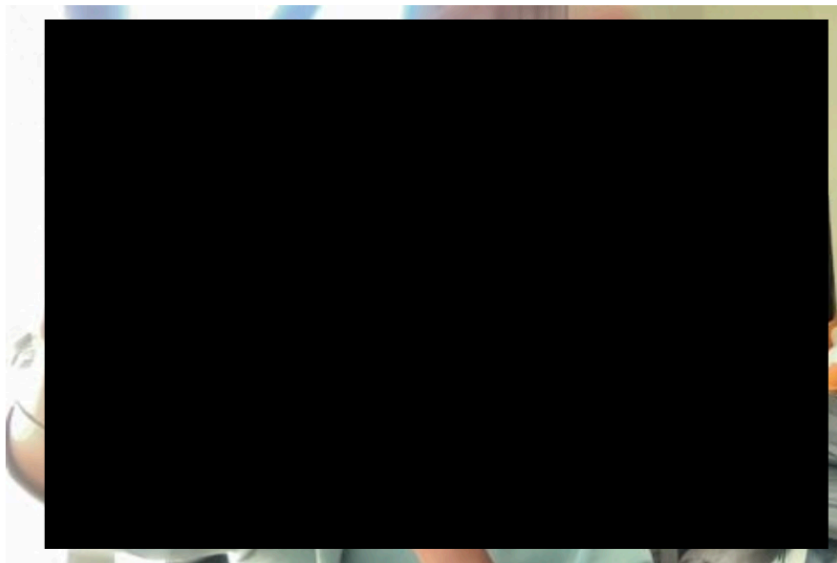Type: RUNNING DETECTED

Zone: reading_area

Date/Time: 1/23/2026, 4:23:58 PM

Sensor Data

Movement Speed: undefined m/s

Noise Level: undefined dB

Visual Evidence

Teacher Signature   Page 1 of 1

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Figure 3: Reviewing alert metadata and generating a Teacher Signature PDF.

Generating Reports:

Click the **View** button on any alert to open the metadata modal. From there, you can download a generated PDF that includes:

- Detected behavior type (Running/Loud)
- Exact timestamp and location/zone

- Sensor data (speed and dB)
- Photographic evidence snapshot
- Signature line for formal accountability

🗑 Data Retention & Privacy

By default, the system follows a **5-Hour Ephemeral Retention Policy**. All alerts and snapshots are permanently deleted from both the dashboard and the server after 5 hours to protect student privacy.