i3Ai Trajectory Anomaly

AI-Powered Detection of Abnormal Movement Patterns for Theft Prevention

Key Challenges

In retail and other public environments, preventing theft and ensuring security requires more than just traditional surveillance methods. Understanding and tracking the movement of individuals can reveal abnormal patterns that signal potential theft or other unauthorized behavior.

What is i3Ai Trajectory Anomaly?

i3Ai Trajectory Anomaly leverages advanced AI to track and analyze the movement of individuals within a store or facility, identifying unusual behaviors that may indicate theft or suspicious activity. By monitoring customer trajectories and comparing them against expected movement patterns, the system detects anomalies such as **cart push-outs through unauthorized exits or bypassing self-checkout stations without paying.** These insights empower businesses to make the necessary actions to proactively mitigate these concerns.

Key Benefits

Abnormal Movement Detection: Track and identify deviations from normal shopping or movement patterns, such as individuals exiting through unauthorized doors or avoiding payment points.
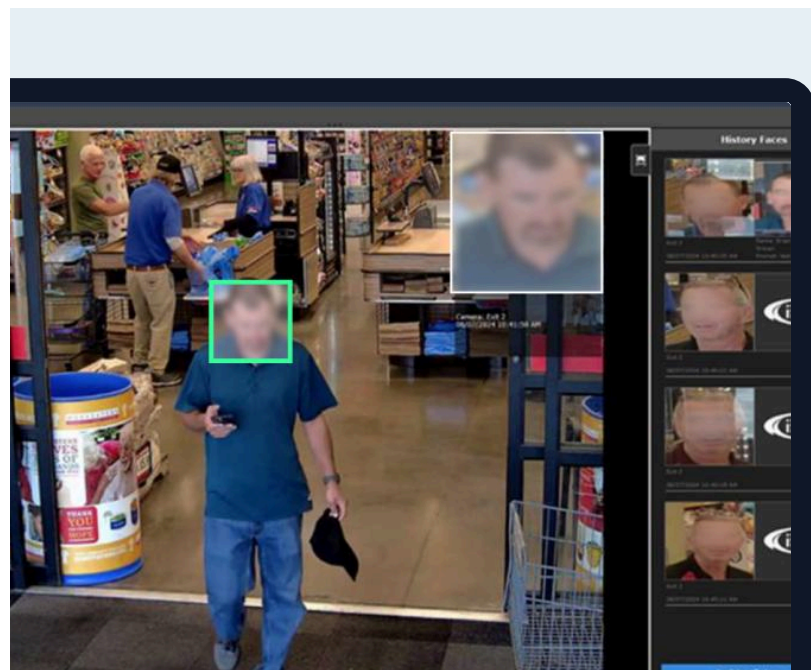
Comprehensive Theft Prevention: Address a wide range of external theft scenarios by identifying unusual movement trajectories that could signal theft attempts.

Integration with Facial Recognition: Optionally integrate with i3Ai Sentry to capture facial data of individuals exhibiting abnormal behavior, providing additional security measures for theft prevention.
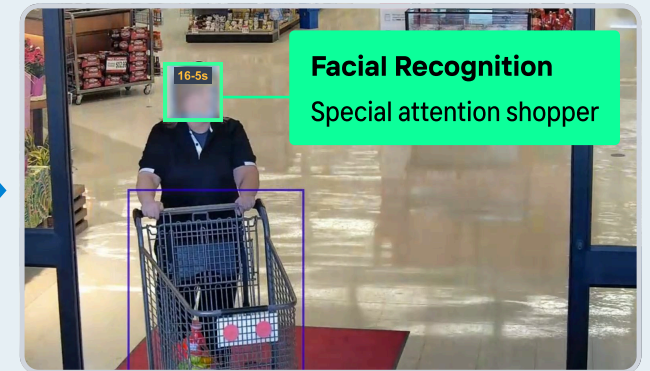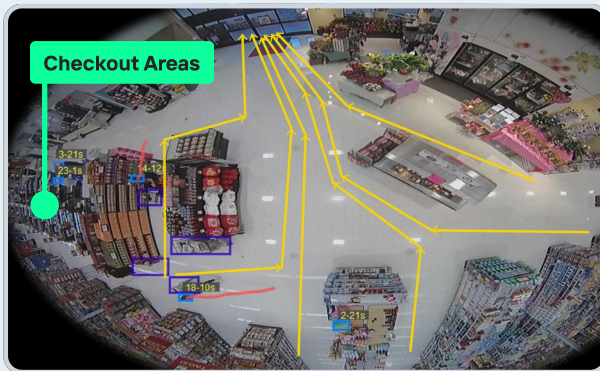
Data-Driven Security: Aggregate incident data over time to identify trends and refine security strategies, enabling businesses to address potential risks more effectively.

What Sets i3Ai Trajectory Anomaly Apart

i3Ai Trajectory Anomaly combines **AI-powered abnormal movement detection** with optional **facial recognition integration with i3 Ai Sentry**, offering a comprehensive solution to detect external theft. Unlike traditional security measures that rely on reactive approaches, this solution proactively identifies suspicious patterns, allowing businesses to respond before theft occurs. Its flexible design allows it to address a wide range of external theft scenarios.

How it Works

Checkout Areas

Anomaly Detection:
Exits without interacting
with checkout areas

Facial Recognition
Special attention shopper

1. **Trajectory Analysis:** The system analyzes the movement of individuals within key areas of the store, identifying unusual patterns such as moving directly to exits without interacting with checkout areas or attempting to bypass secure zones.

2. **Anomaly Detection:** i3's AI compares detected movement against expected behaviors, flagging any anomalies for further investigation. This can include behaviors like cart push-outs or unauthorized exits.

3. **Facial Recognition Integration:** For enhanced security, i3Ai Sentry can be integrated to capture the faces of individuals displaying suspicious behavior, aiding in theft prevention and potential case building.

Key Challenges Addressed

1. **Unauthorized Exits:** External theft is often attempted through unauthorized exits. i3Ai Trajectory Anomaly detects individuals attempting to push carts or leave through areas not meant for customer exits.

2. **Self-Checkout Theft:** Abnormal patterns such as bypassing self-checkout systems without completing payment are quickly flagged, enabling businesses to address theft attempts before they result in losses.

3. **Wide-Ranging External Theft:** Beyond organized retail crime, the solution addresses various external theft scenarios, providing a flexible tool to combat theft in different forms.

Use Cases

- **Retail Theft Prevention:** Detect unauthorized exits and abnormal movements in retail environments, minimizing loss from cart push-outs and bypassed checkout systems.

- **Facility Security:** Monitor and track unauthorized access attempts or unusual movement patterns in high-security facilities or warehouses.

- **Public Space Monitoring:** Use in airports, train stations, or other public areas to detect abnormal movement patterns that could signal security risks or theft attempts.

Success story

Cosentino's Food Stores enhanced security by detecting and preventing external theft using i3 solutions like **Trajectory Anomaly** and **i3Ai Sentry**. This integration identified suspicious behaviors, creating a safer shopping environment. For more, visit Cosentino's Success Story.

Request A Demo

Ready to enhance your theft prevention strategy with **i3Ai Trajectory Anomaly**? **Request a demo today** or Scan QR Code to learn how AI-powered anomaly detection can help you proactively prevent theft and safeguard your business.