AI Technologies and Solutions
Cutting-edge image analysis AI for highly accurate crime prevention and fraud detection

FUJITSU

Fujitsu leverages various business-specific AI technologies, including generative AI, action recognition AI, and demand forecasting, to support the creation of new services and businesses that improve daily convenience and enhance people's abilities and knowledge.

As an example of behavior recognition AI, we provide highly accurate and real-time fraud alerts for self-checkout users. prevents fraud at self-checkouts in stores, helping to prevent loss in stores and supporting store employees, enable sustainable store management.

Reducing loss from self-checkout fraud
Identification and proactive prevention of Customer fraud by AI triggered soft interventions

Management Cost saving
Minimize employee administrative tasks (up to 50% or more reduction in time spent reviewing self-checkout video)
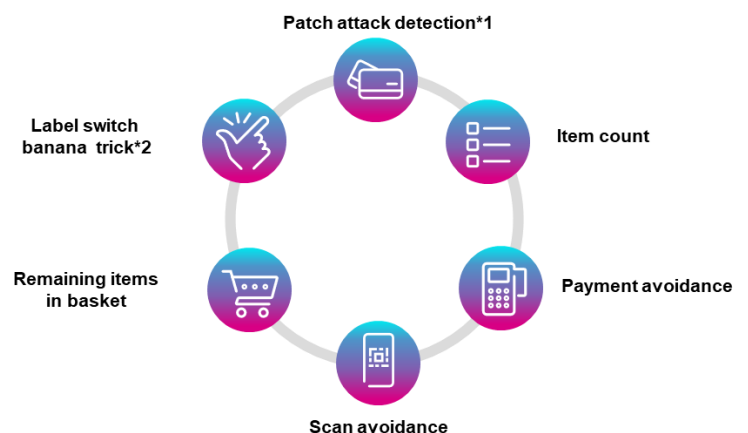
Improving Consumer satisfaction
Highly accurate fraud detection by matching self-checkout video with POS data, reducing unnecessary interference at self-checkout

Functions

Loss rates (including shoplifting or fraud by consumer and store staff) is around 1-3% of store revenue. Especially loss rate of self checkout which is getting popular in grocery stores is higher compared to traditional cashier. Under these circumstances, while there is a demand for mechanisms to create a system to control the loss ratio, employees are burdened with numerous tasks, including dealing with customers, on-site check and surveillance camera footage, analyzing data and responding to the new system.

This service is an all-in-one solution suite that increases the reliability of verification operations and supports workers engaged in verification tasks. Leveraging Fujitsu Uvance's cutting-edge video analysis AI, "Fujitsu Computer Vision," this service provides highly accurate information and data-driven processes, enabling customers to make advanced decisions and transform their business models.

Patch attack detection*1
Item count
Payment avoidance
Scan avoidance
Remaining items in basket
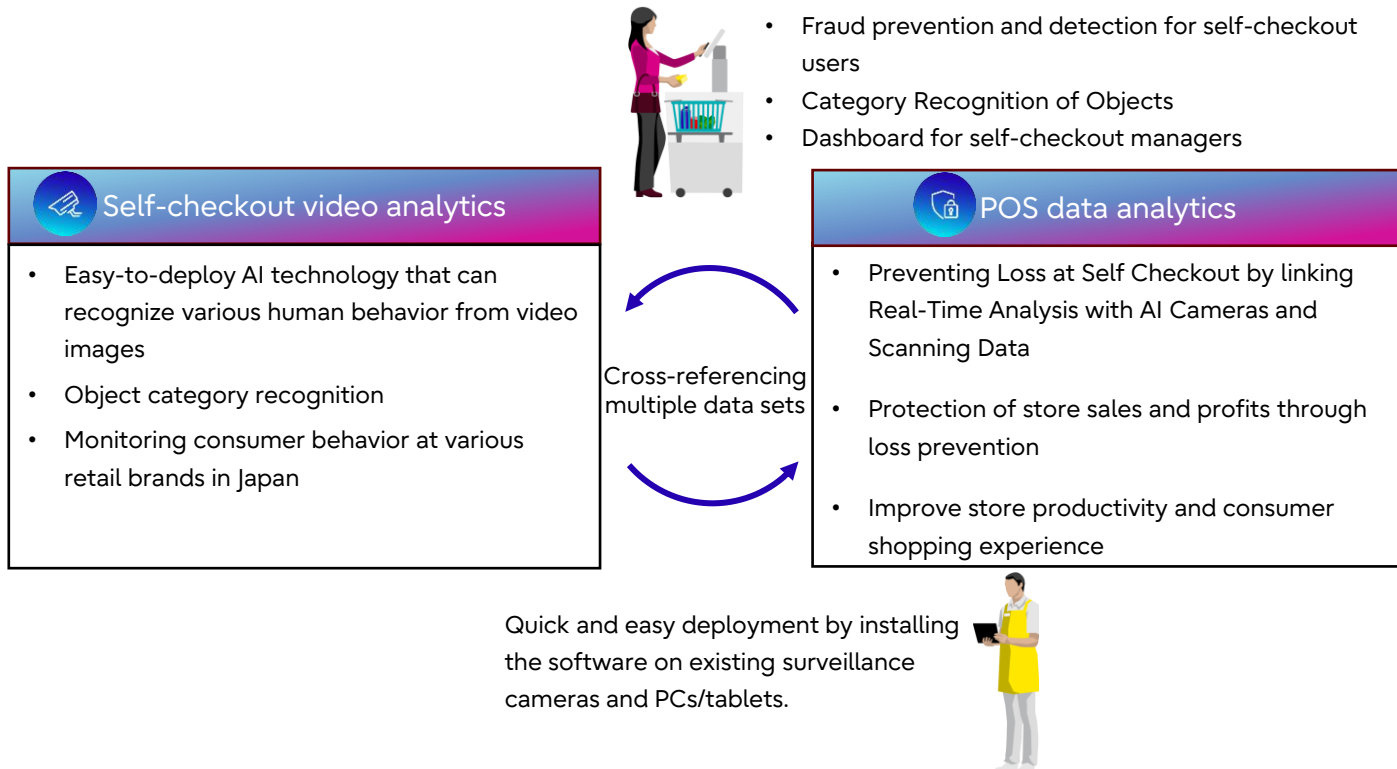Label switch banana trick*2

*1: The act of scanning the barcode of a different product to misrepresent the item being purchased.
*2: The act of selecting a cheaper product when self-selecting and paying for items.

Features

Combines both camera and POS data, matching customer behavior with scanned merchandise data to prevent/detect fraud. Fujitsu's proprietary technologies for self-checkout video analysis and POS data analysis from camera data enable real-time consumer fraud detection and data-based fraud verification by self-checkout supervisors.

- Fraud prevention and detection for self-checkout users
- Category Recognition of Objects
- Dashboard for self-checkout managers

Self-checkout video analytics

- Easy-to-deploy AI technology that can recognize various human behavior from video images
- Object category recognition
- Monitoring consumer behavior at various retail brands in Japan

Cross-referencing multiple data sets

POS data analytics

- Preventing Loss at Self Checkout by linking Real-Time Analysis with AI Cameras and Scanning Data
- Protection of store sales and profits through loss prevention
- Improve store productivity and consumer shopping experience

Quick and easy deployment by installing the software on existing surveillance cameras and PCs/tablets.

Use Case
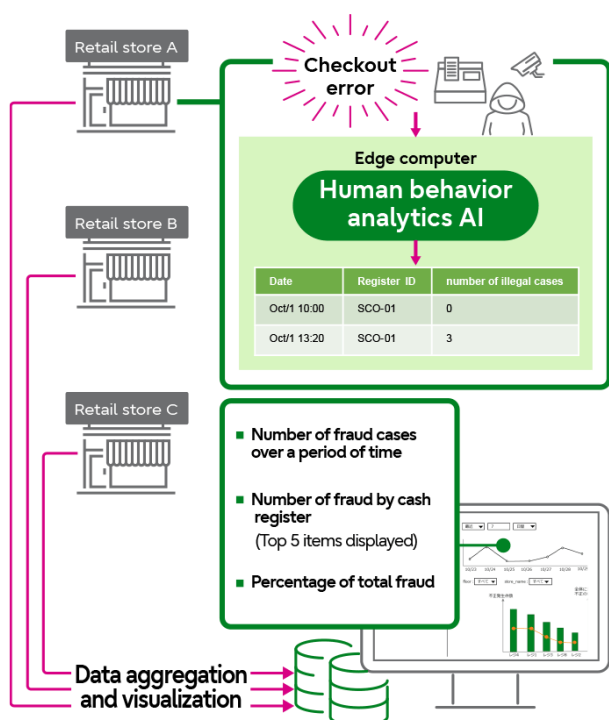
Challenges

- To understand clearly overall trends in fraud detection and trends by each store

Solutions

- In an edge computer environment, the number of illegal register users is output as statistical information using behavior analytics AI (*)
- Output information is aggregated to the cloud, and the number of cashier fraud cases for each cashier is totaled

Effect

- Fraud detection data visualization by each store
- Improved sales profits by enhanced fraud detection measures

(*) : Please consult separately regarding the introduction of behavior analysis AI.

Contact

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Contact Fujitsu

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