

Computer Vision AI in Retail



Computer Vision Is Transforming Retail, From Checkout to Store Operations - Gain Strategic Advantage or Risk Being Left Behind

Market Visibility Challenges for Vendors

- Computer vision AI technology is rapidly expanding across retail operations - from loss prevention and checkout optimization to store analytics and operational efficiency - creating a complex landscape for vendors to navigate
- As the market evolves beyond point-of-sale applications to full-store implementations, comprehensive data is imperative to enable vendors to understand adoption patterns across diverse geographies, use cases, and retail segments
- Competitors with access to detailed market intelligence can identify and capitalize on emerging opportunities more effectively - whether in traditional loss prevention, operational analytics, or next-generation customer experience applications

Strategic Intelligence Drives Success

- Comprehensive deployment and trend data reveals market movements and untapped opportunities specific to your AI solutions
- Detailed competitive benchmarking across retail segments and geographies helps optimize your product positioning and marketing approach
- Authoritative market intelligence validates your position to prospects and strengthens sales proposals when competing for high-value retail contracts

Unmatched Methodology: Data You Can't Find Anywhere Else



QUANTITATIVE BASELINE

- Draw on our established history of retail technology research across multiple touch points
- Unparalleled model of installed base figures for assisted and self-service point-of-sale lanes



TRIANGULATION & VALIDATION

- Accuracy of data verified using two decades of historical market data and external sources
- Data analysed by country, vendor and segment




PRIMARY RESEARCH

- Key quantitative information solicited from industry suppliers
- Insights on latest rollouts obtained from qualitative calls with country experts
- Analysis of market presence of major vendors



SECONDARY RESEARCH

- Primary data complemented by extensive secondary research
- Analysis of annual reports and financial filings
- Press releases plus specialist and mainstream media leveraged for insights on major projects

Comprehensive View of Computer Vision AI Deployments Across Key Markets and Use Cases For Strategic Planning

Computer Vision AI Dataset				
Solution segment	Use case	Metric	Countries	Customer Segments
Loss Prevention Goal: Shrinkage reduction, theft prevention	At checkout (e.g. self-checkout terminal)*	As of June 2026: Number of retailers running solution Number of stores running solution Number of checkouts running solution ¹	USA Canada Australia France Germany UK	Grocery Convenience Mixed General Merchandise Speciality Non-Traditional Venues
	In-aisle monitoring			
Operational Efficiency Goal: Process optimization, resource allocation	Queue management			
	Layout and planogram optimization			
	Inventory management/stock-checking			
Product/Transaction Accuracy Goal: Recognition, identification, compliance	Full basket recognition (checkout)*			
	In-cart (e.g. smart cart)			
	Fresh produce*			
	Age verification (at checkout)*			
Customer Analytics Goal: Journey optimization	Footfall analytics			
	Dwell time measurement			
Vendors	End-suppliers and core technology providers , including Diebold Nixdorf, Edgify, Everseen, Focal Systems, Fujitsu, GK Software/Nomitri, ITAB/Signatrix, Mashgin, NCR Voyix, Scandit, SeeChange, Sensormatic, SymphonyAI, Toshiba, Veesion, VusionGroup, Zebra Technologies			

¹ Only for checkout-based solutions, marked with an asterisk in 'Use case' column

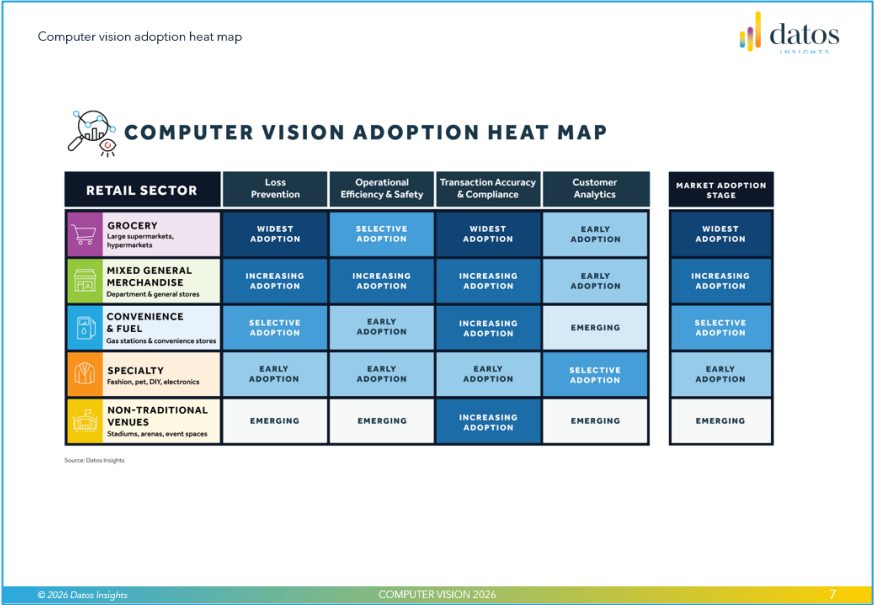
Qualitative Commentary Will Profile Key Vendors and Additional Use Cases, Enabling Deeper Competitive Intelligence

Computer Vision AI in Retail

The study will also provide qualitative insights on emerging trends and suppliers to the market, including:

- Profiles of key vendors
- Competitive landscape and partnership dynamics
- Major project case studies
- Summary of current and emerging AI use cases
- Insights on retailers’ AI priorities and in-house projects

The qualitative insights will offer deeper competitive intelligence and use case guidance that technology vendors and buyers need to navigate this rapidly evolving market



Insights on Use Case Adoption Across Key Retail Segments Help Technology Vendors Navigate this Rapidly Evolving Market

Computer Vision AI in Retail



USE CASES FOR COMPUTER VISION VARY BY RETAIL SEGMENT

 GROCERY E.g. Kroger, Woolworths, Wakefern, REWE, EDEKA, Tesco	 MIXED GENERAL MERCHANDISE E.g. Walmart, Target, Meijer, Sam's Club	 CONVENIENCE & FUEL E.g. Circle K, 7-Eleven, Zabka, Mach 1, Wesco	 SPECIALTY E.g. Virgin Media O2, Gymshark, Schuh, JYSK, Kesko Senukai, Sensormatic	 NON-TRADITIONAL VENUES E.g. Stadiums, airports, campuses, hospitals, transport hubs
Most mature CV market globally. SCO loss prevention at scale — Everseen active with Kroger (1,700+ stores), Woolworths and Wakefern; 35,000 NCR Voyix SCO lanes covered; Diebold Nixdorf working with EDEKA and Les Mousquetaires. On-shelf availability growing via Focal Systems at Morrisons, Asda and ShopRite. Smart cart deployment accelerating — Shopic active with Shufersal and Intermarché; Instacart Caper Carts deployed across US, UK and Australia including Wakefern, Schnucks and Morrisons.	Walmart and Target among the most active CV investors globally, producing in-house solutions. Sam's Club rolled out AI receipt verification to all 600 stores (April 2025). Everseen deployed at Meijer. Focal Systems tracking on-shelf availability for Walmart Canada.	Small-footprint, 24hr unattended formats make CV economics compelling. Frictionless checkout well-established — Circle K, Zabka (50+ stores, Poland), Mashgin with Circle K and Wesco (1,700+ c-store locations globally), NCR Voyix Halo at Mach 1. Age verification critical for alcohol and tobacco compliance	Customer journey analytics are the primary driver. Auravision deployed across Virgin Media O2 (307 UK stores), Gymshark and Schuh. Vusion active with Kesko Senukai (Baltic DIY) on planogram compliance. JYSK combining LP and ops analytics via Solink. Authentication critical for luxury goods and apparel returns.	Fastest-growing CV deployment environment. Mashgin SCO active across 170 sports venues, 50 airports, 50 college campuses and 100 hospitals (the majority of its 4,500+ sites are c-stores, covered separately). AiFi active in 80+ sports arenas across the world; Zippin at Sacramento Kings arena and other stadiums. Amazon Just Walk Out technology licensed to 360+ third-party locations across five countries, including at major sports and entertainment venues.
SCO transaction monitoring On-shelf availability In-aisle theft detection Age verification Fresh produce ID Full basket receipt verification Queue management Goods verification	SCO transaction monitoring Footfall analytics Receipts fraud detection On-shelf availability Customer heat mapping In-aisle theft detection Full basket / smart cart Merchandising optimisation	Frictionless / walk-out checkout Age verification SCO transaction monitoring Unauthorised access detection Queue management Footfall analytics	Footfall analytics Dwell time & heat mapping Product authentication Layout & planogram optimisation Customer journey analytics Returns fraud detection SCO transaction monitoring Merchandising optimisation	Frictionless / walk-out checkout Age verification Queue management Footfall analytics Weapon detection Unauthorised access detection Dwell time measurement
WIDEST ADOPTION INCREASING ADOPTION SELECTIVE ADOPTION EARLY ADOPTION EMERGING				

Source: DatoS Insights

Unrestricted Team Access: Maximizing Value Across Your Company



Market Report

- Key market statistics, trends and commentary by country
- Regional and global comparative analyses
- Familiar PowerPoint format facilitates re-use of material



Market Database

- Charting tool facilitates production of bespoke outputs
- Comprehensive data easily extracted for further analysis



Video Conference

- Live session to present findings to your organisation and discuss implications



Expert Support

- Subject matter experts to aid understanding of data and underlying assumptions

Deep Market Intelligence and Expert-driven Analysis

We help retail technology industry stakeholders benchmark their market position, identify untapped opportunities, validate strategic investments, and make confident decisions about market expansion.

COMPREHENSIVE COVERAGE

Coverage of key in-store solution use cases for Computer Vision AI

Robust data for six key country markets globally

Data and insights on major market players

DEEP MARKET UNDERSTANDING

Multilingual in-house team

Deep industry focus and country expertise

Proprietary research; reliable forecasts

LONG-TERM COMMITMENT

Covering retail technology for >15 years

Reputation for integrity and independence

The authoritative research provider trusted by the industry's major players

FIND OUT MORE



Alan Burt
Director, Market Data and Forecasting

[Contact Us](#)

DATOS INSIGHTS CLIENTS INCLUDE



Datos Insights Powers Financial Services Transformation

Datos Insights is the leading research and advisory partner to the banking, insurance, securities, and payments industries—both the financial services firms and the technology providers who serve them.

In an era of rapid change, we empower firms across the financial services ecosystem to make high-stakes decisions with confidence and speed. Our distinctive combination of proprietary data, analytics, and deep practitioner expertise provides actionable insights that enable clients to accelerate critical initiatives, inspire decisive action, and de-risk strategic investments to achieve faster, bolder transformation.

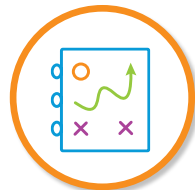
INSIGHTS & ADVISORY



DATA & INTELLIGENCE



CONSULTING



EVENTS



Contact us

Contact our client services team to learn more and become a client sales@datos-insights.com

Explore our latest research and insights on datos-insights.com

© 2026 Datos Insights or its affiliates. All rights reserved. This publication is confidential and may not be reproduced or distributed in any form without Datos Insights' prior written permission. It consists of information collected by and the opinions of Datos Insights' research organization. Datos Insights does not provide legal or investment advice. Your access and use of this publication are further governed by Datos Insights' Terms of Use.

AI Usage Restrictions: This publication may not be uploaded or otherwise provided to publicly accessible AI systems (including LLMs) such as ChatGPT, Claude, Gemini, or similar where such content may be used for model training or may become accessible to other users.



datos
INSIGHTS