Biometric Checkout

Using Biometric Identification for Store Checkout

Min. | Lim. | **High Risk** | Unacc.

EU AI Act classification

The system is high risk due to its use of biometric identification

EU AI Act, Annex III, point 1 (a)

SYSTEM'S DESCRIPTION

The AI system, developed for retail store managers and staff, uses biometric technologies like fingerprint, facial, and iris recognition to make supermarket checkouts faster and more secure for customers.

BENEFITS

	Customers	Store	Institutions and Environment
Reduction in checkout times	■	■	□
Reduction of identity theft and fraudalent transactions	■	■	□
Reduction in the need for human labor at checkout points	□	■	□
Optimization of inventory levels	□	■	□
Reduction in the need for physical payment methods	■	■	■

■ benefit enjoyed by

IMPACT ASSESSMENT REPORT

available in multiple formats including Braille

Last update: 29 Feb 2024

RISKS — MITIGATION STRATEGIES

		Customers	Store	Institutions and Environment
Capability Risks				
Customer data leak	Regular updates with the latest security patches	■	■	■
Delays during power and network disruptions	Maintaining traditional, non-biometric payment methods and checkout methods	■	■	□
Human Interaction Risks				
Unauthorized customer behaviour tracking	Explicit opt-in consent mechanisms for using records of purchases	■	■	■
Customer unfamiliarity	Assistance to unfamiliar customers	■	■	□
Systemic Impact				
Digital exclusion	Assistive technologies including voice-activated systems and adaptive interfaces	■	■	■

■ risk faced by

SYSTEM'S DATA

	Potentially employed for future uses	Personally indetifiable information
Essential		
Facial images	■	■
Iris images	□	■
Fingerprint images	□	■
Payment information	■	■
Non-essential		
Records of purchases	■	■

■ yes

PERFORMANCE OF MODELS ON DATA

Data	Model	Version	Accuracy
Facial images	FR3DNet[1]	3.0	92%
Iris images	HR-IRII[2]	2.2	89%
Fingerprint images	VGGNet[3]	1.1.1	95%
Payment information	RFC[4]	5.5	94%
Records of purchases	Logistic regression	8.1	45%

[1] Deep 3D Face Recognition Network
[2] High-Resolution Iris Recognition with Infrared Illumination
[3] Very Deep Convolutional Network
[4] Random Forest Classification

REPORTING RISKS

Helpline: 0XXX XXX XXX
Reporting portal: report-risk@com
Mail: XX Main Street,
XXX-XXX Contry Z

REGISTERED OFFICE

Name of the company
XX Main Street,
XXX-XXX Contry X

CERTIFICATES

GDPR Compliant

PCI DSS Compliant