Biometric Checkout
Uses biometric identification for store checkout

SYSTEM'S DESCRIPTION

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

BENEFITS

■ (☐) benefit primarily (not) enjoyed by

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

RISKS

☐ very low ■ low ■ high ■ very high

MITIGATION STRATEGIES

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

SYSTEM'S DATA

Currently used	Personally identifiable information
Facial images	■
Iris images	■
Fingerprint images	■
Payment information	■

Potential future uses	
Facial images	■
Payment information	■
Records of purchases	■

PERFORMANCE OF MODELS ON DATA

Data	Model	Version	Metrics
Facial images	FR3DNet[1]	3.0	Accuracy — % of faces correctly identified — 92%
Iris images	HR-IRII[2]	2.2	Accuracy — % of irises correctly identified — 89%
Fingerprint images	VGGNet[3]	1.1.1	Accuracy — % of fingerprint images correctly identified — 95%
Payment information	RFC[4]	5.5	Accuracy — % of payments correctly labeled as fraudulent — 95%
Records of purchases	Logistic regression	8.1	Accuracy — % of correct inventory predictions — 75%

[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