

Biometric Checkout

Using Biometric Identification for Store Checkout

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

<div><div></div> benefit enjoyed by</div> <div><div></div> benefit not enjoyed by</div>	<div>Customers</div> <div>Store</div> <div>Institutions and Environment</div>
Reduction in checkout times	<div><div></div><div></div><div></div></div>
Reduction of identity theft and fraudulent transactions	<div><div></div><div></div><div></div></div>
Reduction in the need for human labor at checkout points	<div><div></div><div></div><div></div></div>
Optimization of inventory levels	<div><div></div><div></div><div></div></div>
Reduction in the need for physical payment methods	<div><div></div><div></div><div></div></div>

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)

IMPACT ASSESSMENT REPORT

available in multiple formats including Braille



Last update: 29 Feb 2024

RISKS

MITIGATION STRATEGIES

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
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Customers

Store

Institutions and Environment

3

3

3

1

1

risk faced by

3

 risk severity:

1

 low

2

 moderate

3

 high

risk not faced by

SYSTEM'S DATA

applicable

not applicable

Essential

Facial images	<div><div></div></div>	<div><div></div></div>
Iris images	<div><div></div></div>	<div><div></div></div>
Fingerprint images	<div><div></div></div>	<div><div></div></div>
Payment information	<div><div></div></div>	<div><div></div></div>

Non-essential

Records of purchases	<div><div></div></div>	<div><div></div></div>
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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