

BIOMETRICS
NEWS

DIGITAL
ID
FOR
ALL

FEATURES
&
INTERVIEWS

INDUSTRY
INSIGHTS

BRAND
FOCUS

BIOMETRICS
COMPANIES

WHITE
PAPERS
&
WEBINARS

BIOMETRICS
EVENTS

Mobile ID Solutions



- Share
- Tweet
- Link
- Comment

Biometric template explainer

May 9, 2022, 7:16 pm EDT | [Tyler Choi](#)

CATEGORIES [Explaining Biometrics](#)

Biometric data is compared by algorithms, and therefore typically stored, in the form of templates. A biometric template is a mathematical representation of features or characteristics from the source data, whether a fingerprint scan, facial image, or voice recording. In the enrollment process the source data is collected the template is created, and then stored in a database as reference data.

Matching is performed by capturing probe data, converting it into a template in the same format as the reference template, and then comparing the two templates for verification or identification.



MOST READ THIS WEEK

National digital ID launches lead to biometrics contract opportunities in Sri Lanka, Jamaica

Eurostar officially launches SmartCheck biometric gates

Ghana to begin issuing digital IDs to newborns from August

ChatGPT facial recognition potential makes OpenAI nervous

Amazon One is coming to all Whole Foods stores

Template creation often involves pre-processing the sample data, such as to enhance contrast, prior to feature extraction. Sample data can be analyzed with a [quality evaluation algorithms](#), like NIST's [NFIQ 2](#) to determine its fitness for use in template creation.

Hackers and thieves seek out biometric templates because if unprotected they could be used to impersonate the victim for access to valuable information or commit crime. In addition to the risk of being stolen or hacked, potential vulnerabilities include being replaced by an unauthorized template, or traced across various databases as a form of surveillance if associated with other personally identifiable information and improperly secured.

Templates are not images, however, and if properly encrypted, are practically impossible to reverse-engineer images from.

Template data can be encrypted once it enters a database, requiring a key to unencrypt and return it to a readable format.

In authentication or identity verification scenarios, biometric reference templates can be stored for one-to-one (1:1) matching in a discrete secure environment, such as the secure element of a user's mobile device, though on-device template matching on its own does not provide assurance of a particular claimed identity.

Additional methods and technologies in development or relatively new to the market for protecting templates

Millions in biometric data privacy lawsuit settlements continue to pile up

UK awards \$84.4M biometric platform tender to IBM

Augentic and IN Groupe win bid for Kosovo IDs amid Veridos tax evasion allegations

Worldcoin's digital ID-linked cryptocurrency hits the markets

NIST meets with digital ID experts globally to win wide framework acceptance

Daily Biometrics News



FEATURED COMPANY

THALES
Building a future we can all trust

Thales (Euronext Paris: HO) is a global leader in advanced technologies, investing in digital and "deep tech" innovations – connectivity, big data, artificial intelligence, cybersecurity and quantum computing – to build a confident future crucial for the development of our societies.

LEARN MORE

More Biometrics Companies



BIOMETRICS RESEARCH

Identifying billions: white paper touts economic heft of digital ID

from theft or misuse include [bio-hashing](#) and [template splitting](#).

Click here for more [explainers](#) on concepts in the field of biometrics.

Article Topics

[biometric data](#) | [biometric matching](#) | [biometric template](#) | [biometrics](#) | [data protection](#)

Latest Biometrics News

Face biometrics, liveness capabilities launched by DocuSign, PresentID, Microsoft
More reports that Hikvision, Nvidia still involved in China ethnic surveillance
NIST discusses new section on VCs and mDLs, timeline for digital ID updates

Worldcoin cryptocurrency drives digital age-ID enrollment despite 'potential privacy nightmare'
Friction grows over age-estimating software and policies for gaming
Indian district rolls out live facial recognition to fight crime wave

Comments

Leave a Reply

Enter your comment here...

This site uses Akismet to reduce spam. [Learn how your comment data is processed.](#)

Study shows data security is key to rebuilding consumer trust

IT sector ready for decentralized identity, says Curity

More Biometrics Research >>>

BIOMETRICS WHITE PAPERS

iGaming white paper 2023

Banking on biometrics: The future of customer authentication

How can financial institutions safeguard against deepfakes: The new frontier of online crime?

More White Papers >>>

BIOMETRICS EVENTS

4th Annual Digital Forensics for National Security Symposium
College Park, MD: Aug 2 - Aug 3, 2023

Cyber DSA 2023
Kuala Lumpur, Malaysia: Aug 15 - Aug 17, 2023

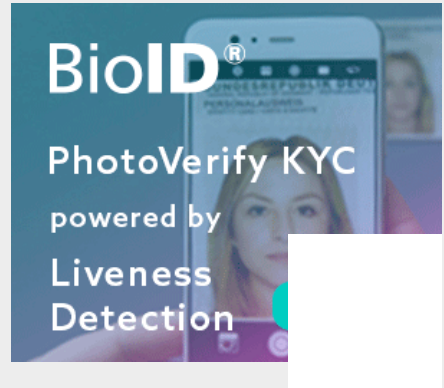
3rd Digital Identity & Authentication Summit MENA 2023
Dubai: Sep 12 - Sep 13, 2023

More Biometrics Events >>>

Subscribe To The BiometricUpdate.com Email Newsletter

Stay on the cutting edge of the biometrics industry by subscribing to daily news updates from BiometricUpdate.com

LEARN MORE



EXPLAINING BIOMETRICS

Real world authentication: Identity-bound biometrics in action

Exploring biometrics within payments

Biometrics in international airports

What are passkeys, and how do they work?

CCTV networks and biometric surveillance

More Biometrics Explainers



BIOMETRIC UPDATE.COM

THALES
Building a future we can all trust

Secure identity solutions for today's world



- [Biometrics News](#) | [Brand Focus](#) | [Research](#) | [White Papers](#) | [Companies](#) | [Solutions](#) | [Request a quote](#) | [Events](#) | [Biometrics in developing nations](#)

[About Us](#) | [Advertise](#) | [Media Kit](#) | [Free Listings](#) | [Submit a Press Release](#) | [Contact Us](#) | [Jobs](#) | [Privacy Policy](#)

Copyright © 2023 Biometrics Research Group, Inc. All Rights Reserved.

Web Design by [Studio1337](#)