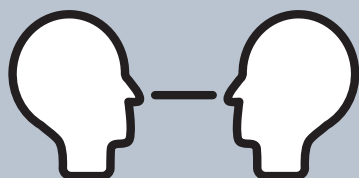
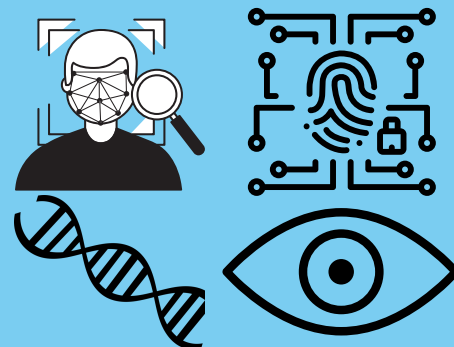


FACIAL RECOGNITION TECHNOLOGY



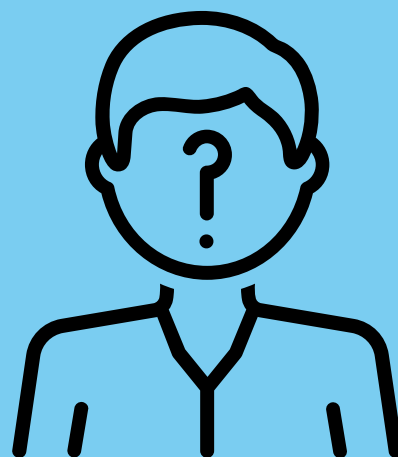
WHAT IS IT?

Your face is a biological trait that uniquely identifies you. It's a biometric, just like fingerprints, DNA, irises, palm prints, and even the way you walk. Facial recognition technology (FRT) includes a range of software products that measure facial features for various purposes. These include verification and identification, emotion recognition, and many more.

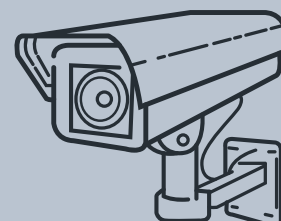


Facial recognition technology can be used to verify if a person is who they claim to be. For instance, when a traveller passes through customs at an airport, a camera can be used to scan their face, and facial recognition software can compare this new image to the ID photo in their passport. If there is a match between the two, the person's identity is verified. Because a new facial photo is compared to the existing ID photo, this is known as a one-to-one comparison.

Facial recognition technology can also be used to identify an unknown individual. Globally, police are increasingly using this software. A facial photograph of an unknown person can be compared to an indefinite number of known people (like mugshots in a criminal database, or ID photos of citizens in a population register). If there is a match, it links the identity in the database to the photo of the unknown person. Since one image is compared to a number of images, this is also known as a one-to-many comparison. This is similar to how police use fingerprints found at a crime scene to search for unknown suspects against a database of known criminals' fingerprints.



One-to-many facial recognition can also be applied to footage or images of an uncooperative subject (in other words, a person who is not voluntarily facing a camera to have their photo taken). This use of facial recognition is especially suited to situations where surveillance cameras film public spaces where persons move about freely. These can include public transport (like trains and roadways), schools, and office buildings. This presents a new opportunity for authorities to track people's movements, since public video surveillance systems are proliferating and, unlike fingerprints, one's face is on public display.



FACIAL RECOGNITION TECHNOLOGY

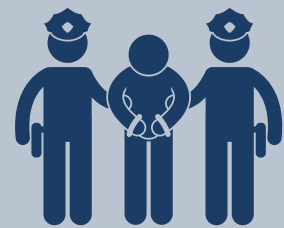


HUMAN RIGHTS AND THE LAW

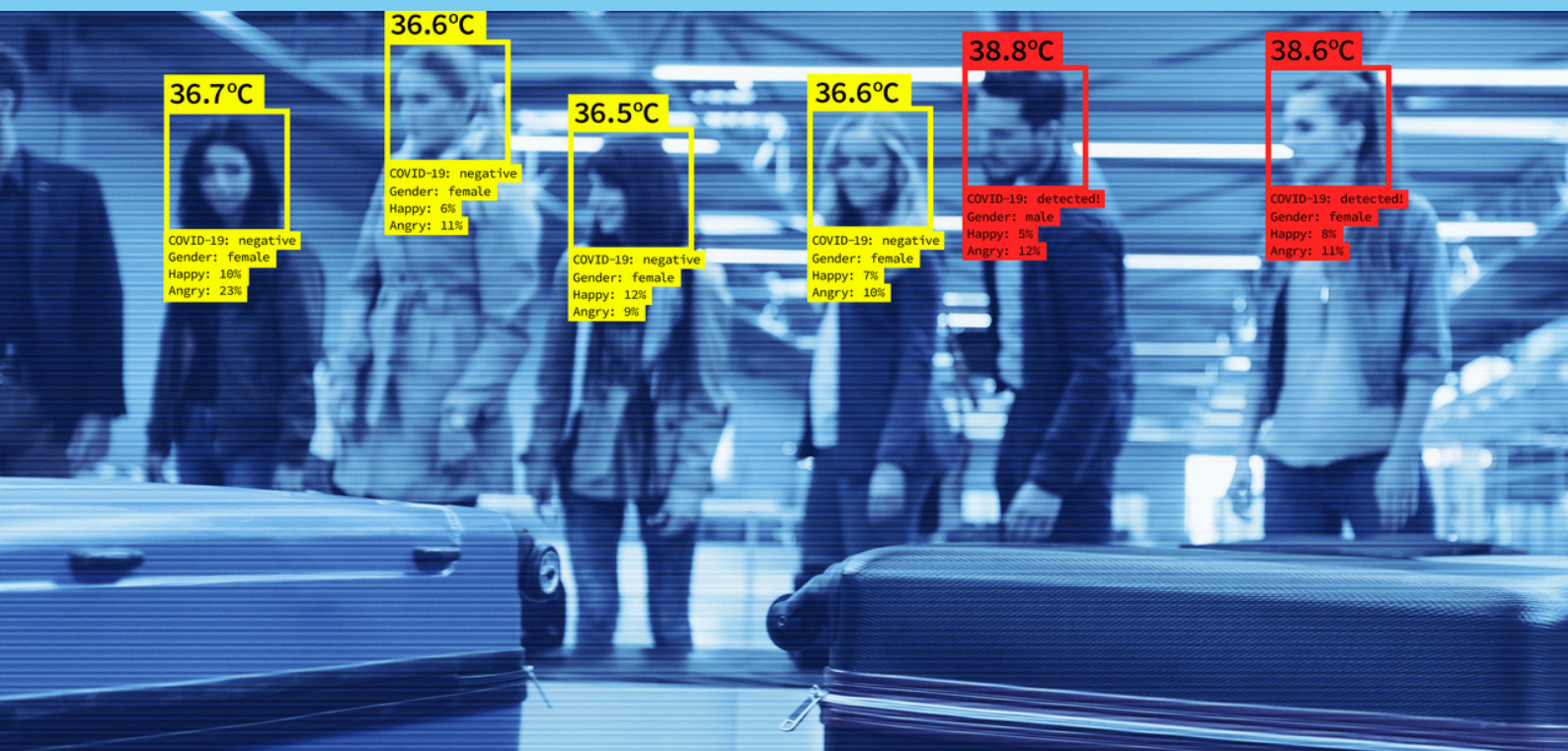
Facial recognition is increasingly meeting with opposition in democratic countries. A common problem is that facial recognition algorithms are less accurate when identifying persons of colour and females. FRT has mostly been developed by white males, and works best on white male faces. Objective studies have found that demographic traits impact the accuracy of the majority of FRT software programmes.



This bias and inaccuracy poses a problem for both identification and verification. If a person is falsely identified as a criminal, they could land in jail with a criminal record. If a person's identity verification fails, they can be denied access to, for instance, the workplace or ports of entry.



Another aspect of facial recognition that advocacy groups have warned against, is the potential for identifying and tracking individuals in public spaces (such as on roads, sidewalks and public transport). Because one's face is on public display, and because public space surveillance is becoming so widespread, facial recognition has introduced a new opportunity for authorities to track people as they go about their daily business. Given the improvements in facial recognition driven by COVID-19, it could become even more difficult for people to escape such tracking. This could have a chilling effect on people's privacy, freedom of movement and association, and right to protest.



36.7°C

COVID-19: negative
Gender: female
Happy: 10%
Angry: 23%

36.6°C

COVID-19: negative
Gender: female
Happy: 6%
Angry: 11%

36.5°C

COVID-19: negative
Gender: female
Happy: 12%
Angry: 9%

36.6°C

COVID-19: negative
Gender: female
Happy: 7%
Angry: 10%

38.8°C

COVID-19: detected!
Gender: male
Happy: 5%
Angry: 12%

38.6°C

COVID-19: detected!
Gender: female
Happy: 8%
Angry: 11%