

## Face Recognition Technology and The World of Work

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Facial recognition is leading the way in contactless recognition technology. Having been the type of technology that is usually kept for futuristic movies or high-security buildings; facial recognition has become a useful tool for businesses worldwide.

### **How does facial recognition work?**

Facial recognition is a way of recognizing a human face through technology. A facial recognition system uses biometrics to map facial features from a photograph or video. It compares the information with a database of known faces to find a match. Facial recognition can help verify personal identity, but it also raises privacy issues. Technologies vary, but here are the basic steps:

Step 1. A picture of your face is from a photo or video. Your face might appear alone or in a crowd. Your image may show you looking straight ahead or nearly in profile.

Step 2. Facial recognition software reads the geometry of your face. Key factors include the distance between your eyes and the distance from forehead to chin. The software identifies facial landmarks — one system identifies 68 of them — that are key to distinguishing your face. The result: your facial signature.

Step 3. Your facial signature — a mathematical formula — is compared to a database of known faces. In addition, consider this: at least 117 million Americans have images of their faces in one or more police databases. According to a May 2018 report, the FBI has had access to 412 million facial images for searches.

Step 4. A determination is made. Your faceprint may match that of an image in a facial recognition system database.

### **What are the benefits of facial recognition in the workplace?**

Facial recognition is an irreplaceable technology that allows access to someone based on facial features; it is popular because:

- No more need for locksmiths, you will never lose your face!
- Even under minimal lighting facial recognition works.
- No digging around in your bag for your key anymore, your face is always in the same place.
- Facial recognition is a contactless form of identification, great for sterile environments.
- Facial software allows you to give access to employees and restrict other areas that might contain sensitive information.

- No need to carry multiple keys, all you need is you for entry.
- No need to pay for the time that your employee is not present; your face allows you to clock in and clock out as you enter.
- Forget time theft, no one else can clock in for you.

In general, that is how facial recognition works, but who uses it?

### **Who uses facial recognition?**

A lot of people and organizations use facial recognition — and in many different places. Here are few employers that use facial recognition;

U.S. government at airports. Facial recognition systems can monitor people coming and going to airports. The Department of Homeland Security has used the technology to identify people who have overstayed their visas or may be under criminal investigation. Customs officials at Washington Dulles International Airport made their first arrest using facial recognition in August 2018, catching an impostor trying to enter the country.

Mobile phone makers in products. Apple first used facial recognition to unlock its iPhone X and continues with the iPhone XS. Face ID authenticates — it makes sure you're you when you access your phone. Apple says the chance of a random face unlocking your phone is about one in 1 million.

Colleges in the classroom. Facial recognition software can, in essence, take roll. If you decide to cut class, your professor could know. Do not even think of sending your brainy roommate to take your test.

Social media companies on websites. Facebook uses an algorithm to spot faces when you upload a photo to its platform. The social media company asks if you want to tag people in your photos. If you say yes, it creates a link to their profiles. Facebook can recognize faces with 98 percent accuracy.

Businesses at entrances and restricted areas. Some companies have traded in security badges for facial recognition systems. Beyond security, it could be one way to get some face time with the boss.

Religious groups at places of worship. Churches have used facial recognition to scan their congregations to see who's present. It's a good way to track regulars and not-so-regulars, as well as to help tailor donation requests.

Retailers in stores. Retailers can combine surveillance cameras and facial recognition to scan the faces of shoppers. One goal: identifying suspicious characters and potential shoplifters.

Airlines at departure gates. You might be accustomed to having an agent scan your boarding pass at the gate to board your flight. At least one airline scans your face.

Marketers and advertisers in campaigns. Marketers often consider things like gender, age, and ethnicity when targeting groups for a product or idea. Facial recognition can be used to define those audiences

even at something like a concert.

A growing number of employers today are looking to incorporate the use of artificial intelligence and facial recognition software into the workplace. Government-sponsored research in China, for example, has been looking to have workers wear headgear, *equipped with brain-monitoring EEG sensors*, to try to assess the moods of employees when they are at work. Now employers in Japan are looking to move in the same direction as well. **One**

**IT company in Japan, E-ComeTrue, is working on facial recognition software that will help employers to scan the faces of their employees as they enter and leave the workplace.** The hope is that by analyzing their smiles, the software will be able to assess how they feel at the beginning and at the end of the day. It might eventually start making its way into a variety of bars, restaurants, and other service areas, as more employers find some sort of benefit from scanning the faces of their employees.

**The technology is ultimately going to measure the smile and assign some smiley face points based on how happy or sad the employee looks.** If they continually scan their face with a frown, they might be approached by management about why they aren't **smiling enough**. According to the company, they feel that because a smile is demanded from the employee before they clock-in, that it would be ideal to implement in venues such as restaurants and bars.

They are not the first company either, to try to monitor employees this way. There has been a growing number of employers over the years who have been looking *to incorporate this technology into their business model*. **Now, it is reported that there are employees having their emotions monitored in dozens of different factories and businesses.**

Aside from using AI and facial recognition software etc, to try to monitor the employees' emotions or mood, there are also companies now that have started **implanting microchips** into their employees. Stories about employees receiving their microchips started to surface several years ago, with workers in countries like Sweden volunteering to be part of the project. Now that technology has also made its way to the US, American companies also now offering microchips to employees.

In the coming years, the workplace around the world might look *very different* from what we are used to seeing; the more that this sort of technology gets incorporated into the environment and accepted for use as commonplace.

## Reasons to be concerned about your privacy

Privacy matters. Privacy refers to any rights you have to control your personal information and how it's used — and that can include your faceprint.

So, what are the issues? Here are some:

- Security. Your facial data can be collected and stored, often without your permission. It is possible hackers could access and steal that data.

- Prevalence. Facial recognition technology is becoming more widespread. That means your facial signature could end up in a lot of places. You probably won't know who has access to it.
- Ownership. You own your face — the one atop your neck — but your digital images are different. You may have given up your right to ownership when you signed up on a social media network. Or maybe someone tracks down images of you online and sells that data.
- Safety. Facial recognition could lead to online harassment and stalking. How? For example, someone takes your picture on a subway or some other public place and uses facial recognition software to find out exactly who you are.
- Mistaken identity. Say, for instance, law enforcement uses facial recognition to try to identify someone who robbed a corner store. Facial recognition systems may not be 100 percent accurate. What if the police think the suspect is you?
- Basic freedoms. Government agencies and others could have the ability to track you. What you do and where you go might no longer be private. It could become impossible to remain anonymous.

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