

Packet #7

Week of June 1

Contents:

1. Are You Being Watched
2. Article Summary
3. Journal Assignment

Are You Being Watched?

Some schools, airports, and cities are using technology that can recognize people's faces. Is it being used to keep an eye on you?

SEPTEMBER 2, 2019 | By Steph Smith



JEFF MANGIAT (PHOTO ILLUSTRATION); TROY AOSSEY/GETTY IMAGES (CLASSROOM); ISTOCK/GETTY IMAGES (WHITEBOARD); SHUTTERSTOCK.COM (STATIC LINES, SECURITY CAMERAS)

AS YOU READ, THINK ABOUT the benefits and risks posed by technology that can recognize people's faces.

You're sitting in class listening to today's lesson when your mind starts to wander. At first, your teacher doesn't notice you've stopped — but the cameras watching you do. They scan the faces of you and your classmates every second to determine how engaged you are. The cameras can even tell if you're bored or not paying attention. This scenario may sound like science fiction, but *facial recognition technology* like this is actually being used in a school in China. It can



GILLES SABRIE/THE NEW YORK TIMES/REDUX (STREET); SHUTTERSTOCK.COM (CAMERA)

KEEPING TABS: The Chinese government is investing billions of dollars in facial ID tech to monitor its citizens.

Right now, schools in the U.S. aren't using this kind of technology to keep tabs on students' behavior. And it may never be used for that. In cities that use cameras that identify visitors, too, facial recognition is an added safety feature.

Some people are embracing this high-tech trend. But it's raising red flags for others. They believe facial recognition, which is often used without individuals' knowledge, could be a privacy issue.

Gender Shades

Watch a video about biases in facial recognition algorithms.

HELPFUL TOOL?

Facial recognition is just one of many types of technology today that utilize *biometrics* to identify people. Biometrics are measurements of unique physical or behavioral characteristics.

Anil Jain is a computer scientist and biometrics expert at Michigan State University. He investigates how facial recognition technology can be used. "It can do a comparison a million times a second," says Jain. Some experts think the technology could be used in a similar way to help schools.

Another advantage of the technology, some say, is to simplify security screenings in high-traffic places. For instance, travelers no longer have to show their passports multiple times at the Delta Air Lines international terminal.



CAROLYN THOMPSON/AP PHOTO

SAFER AT SCHOOL? Facial recognition systems may become a new security tool at some U.S. schools.

SCANNED AT SCHOOL

In the wake of several deadly shootings at schools in the U.S., some educational institutions are interested in using facial recognition to improve security.

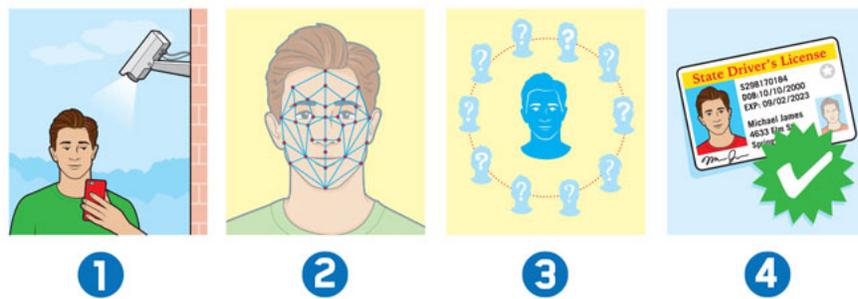
Critics, though, say there's no evidence this technology makes schools safer. Groups that work to protect basic human rights, like privacy advocates, are concerned. "I'm worried about how schools are conditioning young people to expect that everything they do is going to be monitored and tracked by technology."

43 STATES USE FACIAL ID TO SPOT SUSPECTED CRIMINALS

Using facial recognition to assess student behavior is another point of controversy. Outside of China, this technology has mainly been used by law enforcement. Some watchdog groups, though, are critical of facial recognition programs that attempt to read how people are feeling based on their expressions.

HOW FACIAL RECOGNITION WORKS

Half of all Americans have their images, such as a driver's license photo, stored on at least one facial recognition database search.



KATE FRANCIS

1 CAPTURING: A camera collects an image of an unknown person's face.

2

EXTRACTING: Software identifies facial features in the image and defines them as a set of values. These data points make up the profile.

3

COMPARING: The facial profile is compared with those of known faces, which can number in the tens of millions, stored in a database.

4

MATCHING: The software decides whether the original image likely matches any picture in the database. If it does, the person may be identified.

SKEWED SYSTEM

Another problem with facial recognition is how often it makes errors. The technology is far more accurate at recognizing people than it

but not everyone. It has a harder time correctly identifying women of color and sometimes fails to notice them at all. Researchers at the

These issues exist because all people—including facial recognition software developers—have unconscious *biases*, or ingrained stereotypes, that affect their behavior, according to Meredith Broussard, an *artificial intelligence*—a computer’s ability to perform tasks normally associated with human intelligence—to learn to recognize faces. But the databases of images used by the software have typically contained more white people than those of color. “People who created this didn’t notice, because they were mostly white men,” Broussard says.

One way to improve the situation is to make the teams working on facial recognition software more diverse. Until that happens, Broussard says, there will be real-world consequences, such as leading police to pursue the wrong suspects or mistakenly arrest someone who’s innocent.



BILL O’LEARY/THE WASHINGTON POST/GETTY IMAGES

FORGET YOUR TICKET: At Dulles airport in Virginia, passengers get their faces scanned—not their boarding passes.

SURVEILLANCE STATE?

Civil liberties groups have strongly opposed the use of facial recognition by law enforcement agencies, as well as in places like schools—countries that closely monitor their citizens.

That’s already happening in China. Its government uses facial recognition cameras to create a giant surveillance network that not only

**400
MILLION
PEOPLE’S
IMAGES
ARE IN FBI
DATABASES**

In the U.S., some police departments also tested facial recognition to gather information about people on the streets. They claim it’s to identify suspects. Being watched all the time can cause people to be fearful, says Jeramie D. Scott, a senior lawyer at the Electronic Privacy Information Center. “Being anonymous allows freedom of thought,” says Scott.

“It lets you not worry about every single thing you do being scrutinized by an authority figure.”

FINGERPRINTS AND BEYOND

Facial recognition is just one way biometrics can be used to identify people. Here are five other unique physical characteristics



COURTESY OF SIMPLY GUM

FINGERPRINTS: Each person has his or her own pattern of ridges on the skin of each fingertip. They can be used to unlock some

IRIS RECOGNITION: Each person's irises, or colored parts of the eye, contain intricate structures. Up-close images of these details can act as a form of identification.



COURTESY OF SIMPLY GUM



COURTESY OF SIMPLY GUM

HAND GEOMETRY: Measurements of the hand, like the lengths of fingers, are often used to allow students or workers access to facilities



COURTESY OF SIMPLY GUM

EAR SHAPE: A computer program scans the curves and folds of the ear. The result could be useful in identifying a person from a profile



COURTESY OF SIMPLY GUM

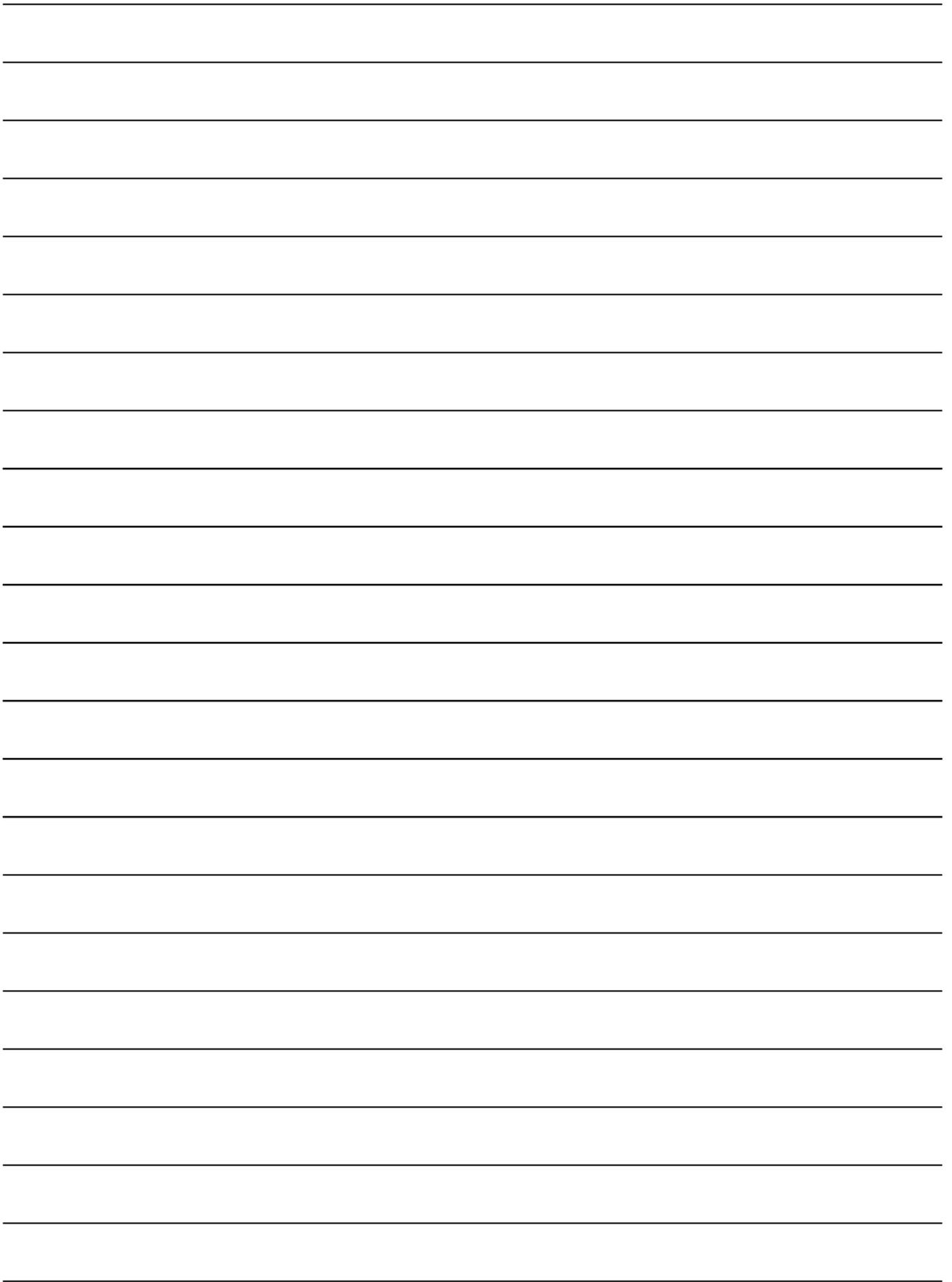
VOICE IDENTIFICATION: The unique sounds of a person's voice can authorize a speaker to access a secure system, like a bank account

As facial recognition becomes more widely used, many people want to ensure the technology won't be abused. They're calling on lawm
Meredith Broussard, the artificial intelligence expert, believes the facial recognition debate is part of a larger discussion. She says peop
"Educate yourselves about technology so that you can empower yourselves to create the kind of world that you want to live in."

WEIGHING THE EVIDENCE

What is your view on facial recognition? Use evidence from the text to construct an argument for or against the technology. Use

- 1 Do you think facial recognition technology is more helpful or harmful to society?
- 2 What rules, if any, would you put in place to regulate the use of facial recognition technology?
- 3 How do you feel about cameras scanning your face in school, at the airport, at a concert, or in other public spaces?





This week's journal entry is the following questions:

1. What do you miss most about your life before the Pandemic? Are there moments of "normal" that you feel yourself wanting? Is there anything from life a few months ago that you took for granted?
2. What are your favorite games? Board games, video games, or games on your phone. What games are you turning to for fun?
3. How can you tell a story about your life right now through a few simple numbers? Number of times you opened the refrigerator today? TikTok videos watched? Different outfits worn this week? Show us what your day or week looks like right now.

Pick 1, 2, or 3 and answer all the questions in your journal.

