Facial recognition will transform airport security checkpoints

Imagine using technology that never forgets a face, while improving airport security and shortening lines. Such technology exists and may be coming to an airport near you.

Every flyer over the past two decades knows that airport security procedures involve a lot of unpacking, screening and repacking. This is the price that must be paid for using commercial air travel.

Yet, it does not need to be this way, and the Transportation Security Administration has the right idea in testing and deploying biometrics such as facial identification technology at airport security checkpoints.

Although travelers believe that the most important task undertaken by the TSA is detecting threat items, the true role of airport security screening is ensuring that you are the person you claim to be.

The TSA has been working on moving more passengers from “unknown” to “known” status for more than a decade. The first effort in this regard was the introduction of TSA PreCheck in 2011, which gives travelers the privilege (for a fee) of accessing expedited screening lanes. This means that your shoes can stay on, your computers and electronics can stay in your carry-on bag, and light outerwear can remain in place.

The launch of facial identification technology enhances such efforts and has the potential to revolutionize the way that airport security checkpoints are designed and operated.

Facial identification technology ensures that you are who you claim to be. When presenting yourself at a checkpoint, your face becomes your entry pass, based on a repository of pictures that you have voluntarily provided in the past. These pictures are assembled from passports or visas.

Another technology the TSA has deployed to enhance identity verification is Credential Authentication Technology. This, in concert with REAL IDs, which regrettably have been delayed until 2025, as a requirement for air travel, provide a more robust process for identity verification.

Facial identification technology takes this process to a new level of robustness. After more than two decades in a post-9/11 world, most travelers believe that airport screening is about stopping threat items from getting onto planes. In reality, the focus on detection is a surrogate for stopping bad people from inflicting harm to the air system. By elevating identity validation, the need for threat item detection is reduced.

Once a person’s identity is confirmed using facial identification technology, they may be subjected to expedited screening, much like those who have been vetted by TSA PreCheck. As more people opt in to the facial identification program, the aggregate air system risk is reduced.

The biggest criticism of facial recognition technology is the perceived invasion of privacy and the security of photos taken at checkpoints. Yet, the photos being used to match your identity, like when applying for a passport or participating in the Global Entry program, are those that have already been shared with Customs and Border Protection. New photos taken at airport security checkpoints do nothing more than supplement what has been freely provided.

As for the security of such photo data, the cyberworld has been and continues to be the Wild West for criminals. Much of what we do on our phones may be more vulnerable to intrusion than the photos stored by the Department of Homeland Security.

The long game for facial identification technology is screening in real time. This means that most travelers can pass through checkpoints without stopping, with none of their personal items requiring screening.

This futuristic vision for airport security is a far cry from the physical screening-centered approach travelers endure today. Facial identification technology is a driver to make this future a reality. Such changes will not happen overnight. It will take many years before facial identification technology is sufficiently robust to effect such massive changes.

Sheldon H. Jacobson is a professor of computer science at the University of Illinois at Urbana-Champaign.