AI-trained computers can scan eye and facial movements to recognize subtle signs of stroke

Patients at Johns Hopkins Hospital who are suspected of having a stroke might get an unusual request from physicians: Can we film your face? The doctors' goal is to identify stroke patients by facial characteristics instead of waiting for brain scans or blood tests, helping speed both treatment and recovery.

The Johns Hopkins team is training a computer algorithm to recognize changes in the patients' features, such as the paralysis of certain facial muscles or unusual eye movements, that might indicate damage to the brain from a stroke as opposed to seizures, severe migraines or anxiety disorders.

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Early research efforts point to a future in which facial scans, perhaps embedded in a smartphone camera or even a bathroom mirror, might monitor our general health while picking up signs of long-term neurological ailments such as dementia. Some researchers believe algorithms might even be used to track how well a treatment or drug is working by detecting changes in a person's face.

"The problem is getting people to act on the data and trust the data," says Ken Stein, chief medical officer of Boston Scientific, a biomedical firm which uses AI algorithms in its heart monitors to predict the risk of heart failure in some patients.

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