

Can CCTV help contain the Coronavirus?

As the infection rate continues to rise on a daily basis from the outbreak of the Coronavirus, we report on the news that CCTV and facial recognition technology is being used in countries such as China to help contain the virus.

Concerns over the mass outbreak of COVID-19, otherwise known as the Coronavirus, continue, with the [World Health Organisation \(WHO\) urging countries to step up](#) measures to detect and contain the virus, which “poses a very great threat for the rest of the world”.



So, how can video surveillance and facial recognition technology help?

There is plenty of debate over the use of surveillance in China, particularly regarding privacy concerns and the use of facial recognition – this is not just contained to China, as shown in the recent case use by the [Metropolitan Police in London](#). Many of the country’s inhabitants have long been aware of the amount of surveillance infrastructure in place, with plans for this to increase, as suggested in a recent [Guardian Podcast](#) on the subject.

However, a report from Reuters indicates that the technology is currently being used to [detect cases of Coronavirus](#) and help contain the spread of the outbreak, which started in the Wuhan province and has now [infected over 40,000 people in China](#) alone. The report highlights one case study, whereby the authorities were able to track a resident from Hangzhou who had recently taken a trip to nearby Wenzhou – an area that has been affected by the virus – via the use of facial recognition cameras. The individual was subsequently instructed to stay indoors for two weeks.

In addition, [Guangzhou City has now rolled out thermometers on its city buses](#), which utilise facial recognition to scan passengers to quickly identify any symptoms of the virus.

Not stopping there, the report highlights that some surveillance cameras have the ability to recognise low-grade fevers, and therefore may even be used to detect cases of the Coronavirus.

The industry ministry has reportedly since [sent a message to the country's AI companies](#) and research bodies to help identify new ways of containing the outbreak. According to reports, the thermometers can scan passenger foreheads in one second, sending an alert to the driver if an anomaly is detected.

It's not just in China, that this process is taking place, either. Moscow is also looking to its network of facial recognition cameras to play a key role in [battling the spread of coronavirus in Russia](#). While the technology was recently rolled out despite protests and legal complaints, the 100,000 cameras in place in Russia's capital are now linked to artificial intelligence systems. This process is said to be helping in regulating its the compulsory quarantine the city is currently under.

Facial recognition and masks

Initially, as these reports surfaced, it was thought that the face masks many are wearing as part of protective measures may hinder the facial recognition technology. However, a company in China has outlined that the [technology exists to identify people who are even wearing masks](#).

Hanwang Technology, also known as Hanvon, has said that a research team of 20 staff was able to come up with the solution, using a sample database of about six million unmasked faces and a smaller database of faces that were masked. Beginning work in January, it was announced that the technology is then able to detect abnormally high temperatures of individuals, in an effort to combat the spread of coronavirus and potentially other fever-related issues.

Thermal cameras and COVID-19

Cameras with thermal technology built into them, are also being used to identify potential cases of the virus. Many of these cameras are able to assess the internal body temperature of individuals as they pass through their field of view, and video analytics software is then able to identify a potential fever, or abnormal body temperature, that could point towards a new case.

The Dubai World Trade Centre, for instance, recently announced it was taking extra-precautionary measures to control and monitor access to its Sheikh Rashid Tower and "ensure the wellbeing of all our tenants and visitors". In a message sent out to its customers, it stated: "You will be passing through the thermal cameras/scanners and/or will be referred to be medically checked by medical professionals (if required)."

AI and big data tackling COVID-19

Speaking to [RMDS Lab](#), a company specialising in artificial intelligence and big data, IFSEC Global understands that AI-powered interactive graphs are tracking the virus' migration across China, with the company working on creating an alert system, whereby users will be able to receive information about whether an infected individual has traveled within their vicinity. These graph models are also being used by the Chinese Government to find infected individuals and provide medical resources to them.

Big data is also being used to predict the virus' impact on the global economy, to help governments and businesses garner intelligence and analyse risk in real time.

Whatever the concerns surrounding the use of surveillance, AI and big data, particularly in the case of facial recognition, this is certainly an interesting case use of the technologies. These measures may be used elsewhere, as cases outside of China continue to rise rapidly and governments ramping up efforts to contain the virus.