

Harnessing AI to give health sector a shot in the arm

Smart tools and new technology to tackle challenges in healthcare showcased at expo

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Outpatients could soon get to bypass snaking queues when they turn up for a clinic appointment by simply peering into a camera.

A new facial recognition tool notifies medical personnel when high-risk patients arrive so they can then decide whether the patients should be given prioritised care.

The technology was showcased yesterday at the National University Health System (NUHS) building at Singapore's first public healthcare Artificial Intelligence (AI) datathon and expo.

The event encourages tech experts and healthcare professionals

to come together to develop AI and smart tools to tackle challenges in the healthcare sector, such as limited manpower.

The six-day event, which ends tomorrow, was organised jointly by NUHS, the National University of Singapore, AI Singapore – a programme set up to enhance artificial intelligence capabilities in Singapore – and the Massachusetts Institute of Technology.

Dr Ngiam Kee Yuan, NUHS' group chief technology officer, said: "AI could augment the work of Singapore's healthcare workforce and enhance doctors' ability to make better decisions."

Dr Ngiam and Dr Feng Mengling, assistant professor at the NUS Saw

Swee Hock School of Public Health, introduced NUHS' own AI system during the expo: Discovery AI.

The tie-up of different AI tools, they hope, will enhance clinical diagnoses, flag higher-risk patients and ease the burden on healthcare teams in managing patients.

Discovery AI, which has been in the works for four years, pools pertinent data such as patients' medical history, lifestyle habits and history of admission in hospitals.

Using the data, it can perform tasks, including the diagnosis of appendicitis in those with complaints of stomach pain, and even predict the risk of readmission in patients who have been hospitalised for various medical conditions.

This will allow doctors to follow up with at-risk patients and adjust their treatment methods to include components such as video conferencing with patients after they have been discharged.

Dr Feng, who helped develop Discovery AI, is also conducting research on an AI tool that can suss out abnormalities in mammograms. If rolled out, he said, the tool could improve the productivity of radiologists fourfold.

"The tool reduces the time that radiologists have to spend looking at a mammogram and may also point out something that they missed before."

The AI platform is being tested at several wards at the National University Hospital and is expected to be deployed in phases across NUHS institutions such as Ng Teng Fong General Hospital and Alexandra Hospital in the coming years.

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Above: Dr Ngiam Kee Yuan (left), NUHS' group chief technology officer, and Dr Feng Mengling, assistant professor at the NUS Saw Swee Hock School of Public Health, introduced Discovery AI at the expo.

Left: A next gen outpatient clinic will have booths where patients peer into a camera to register for appointments. ST PHOTOS: MADHUMITA PARAMANANTHAM