SingHealth Duke-NUS' AI spinoff inks MOUs with Roche, STE to improve healthcare operations

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ENIGMA Health, a healthcare artificial intelligence (AI) spinoff from SingHealth Duke-NUS Academic Medical Centre, has inked separate memorandums of understanding (MOUs) with Swiss pharmaceutical giant Roche and Singapore technology player ST Engineering to expand the reach of its agentic AI platform.

Agentic AI is a class of artificial intelligence that can reason and act autonomously.

The platform, Enigma, was developed by a team of clinicians and AI scientists to optimise workflow and streamline data-intensive, time-consuming processes at healthcare organisations. This could range from administrative work to analysing surgeries as part of clinical audits.

At the same time, the platform is able to maintain the security and regulatory compliance of the data. "We are not taking any data out from anywhere... we are deploying (Enigma) at the source," said Dr Dario Heymann, chief executive of Enigma Health, at a media briefing on Tuesday (May 27).

The MOUs, signed at the Asia Tech X Singapore Summit, will enable Roche and ST Engineering to make use of Enigma in certain areas.

Exploring technologies

The first MOU signed by Enigma Health and Roche will enable the two entities to jointly explore advanced AI and digital technologies to accelerate clinical trial recruitment, improve market access and enhance business intelligence.

"When you look at clinical trials, 40 per cent of the cost is actually on the recruitment side," said Dr Heymann.

Enigma would be able to identify patients much faster based on the inclusion and exclusion criteria selected by the company, which would then save time and costs for these trials.

Better oversight

The second MOU signing between Enigma Health and ST Engineering will add the AI firm's small language model to ST Engineering's Agil Genie Studio platform, which enables users to build and deploy AI applications.

Small language models are streamlined versions of large language models, which refer to AI systems such as ChatGPT that process vast amounts of text data to comprehend and generate human language.

ST Engineering builds command centres for hospitals, which serve to manage crises such as the Covid-19 pandemic, said Tan Bin Ru, president of enterprise digital at ST Engineering.

"The command centre leverages open-source large language models, but we realised that for specific areas, you actually need the small language model that Enigma is building, and it makes sense then to partner (with Enigma Health)," she said.

For example, the hospital command centre has oversight of operating theatre capacity, but may not have the ability to check more specialised data such as post-surgery audits.

Enigma's addition may then allow the command centre to look at both types of information from the same command centre.

The two signings were witnessed by Minister of State for Digital Development and Information Rahayu Mahzam at the summit's Scaling and Sustaining Healthcare with GenAI Symposium.

In her closing remarks, she said that good governance is as crucial as technological advances in advancing the adoption of AI in healthcare.

"Without clear rules, companies hesitate to invest, and doctors hesitate to adopt new technologies," she said.

While Singapore has provided clear regulatory pathways for adopting AI in healthcare, "healthcare transformation requires collective effort and shared expertise", added Rahayu, who is also minister of state for health.

"The two MOUs exemplify our collaborative approach to healthcare innovation," she added.

Prior to the announcements, Enigma was piloted in several SingHealth institutions, such as the Singapore National Eye Centre, SingHealth Duke-NUS Institute of Precision Medicine (Prism) and KK Women's and Children's Hospital.

"At KK Women's and Children's Hospital and Prism, a pilot with Enigma cut genetic reporting time from 30 minutes per report to just seconds, or 1,400 reports in an hour, instead of weeks," noted Rahayu.