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AI to Detect, Monitor Heart Disease in Singapore

Kirana Aisyah | March 14, 2022

The National Heart Centre Singapore (NHCS) has opened a research laboratory for cardiac imaging that uses Artificial Intelligence (AI) to detect and predict cardiovascular diseases. According to a press statement, the Cardiovascular Systems Imaging and Artificial Intelligence (CVS.AI) research laboratory is the first of its kind in Singapore and Southeast Asia to study the different aspects of heart diseases using various imaging methods, such as CT, MRI and nuclear imaging.

The 185-bed heart referral centre, which sees over 120,000 outpatients yearly, performed almost 17,000 heart scans last year. The CVS.AI lab will leverage the large amount of information collected at NHCS to enhance the precision and efficiency of predicting and identifying cardiovascular diseases.

Specifically, the research lab aims to provide AI techniques in capturing and interpreting cardiac images; conduct in-depth assessments of cardiovascular diseases among at-risk populations, and discover complex patterns of cardiovascular diseases.

SingHealth, which the NHCS is part of, signed a three-year partnership with Singapore Innovate to further the adoption of AI and other emerging technologies in healthcare. The healthcare group also recently entered into a collaboration with National Supercomputing Centre Singapore.

A new tool that could lead to faster diagnosis of heart disease had already been invented by researchers in Singapore. Powered by artificial intelligence (AI), it uses electrocardiograms (ECGs) and has an accuracy rate of 98.5%. ECGs measure the electrical activity of heartbeats to detect heart abnormalities.

Invented by a team from the Nanyang Technological University (NTU), Ngee Ann Polytechnic and the National Heart Centre Singapore (NHCS), the new diagnostic tool uses an AI machine learning algorithm that enables computers to learn from past experiences like a human.