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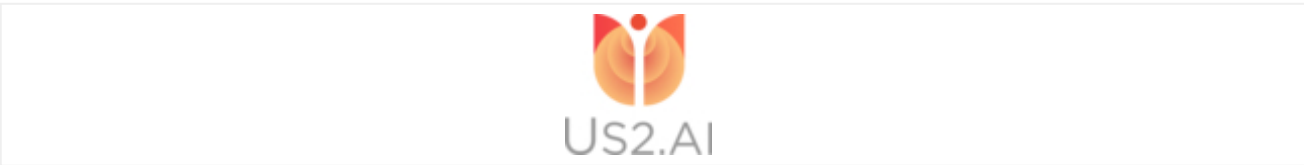

Us2.ai Partners with Leading Academic Medical Center to Collaborate on AI-Enabled Echocardiography Software

Partnership will co-develop and commercialize AI tools for echocardiography to enable earlier detection, improved diagnosis and more efficient monitoring of heart failure

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SINGAPORE--(BUSINESS WIRE)--Us2.ai, a Singapore-based MedTech firm, has partnered with **Duke University** to co-develop and commercialize AI tools for echocardiography, to enable earlier detection, improved diagnosis and more efficient management of heart disease.

In clinical practice, echocardiography is now firmly established as a central, affordable front-line tool for diagnosis and management of a range of cardiac conditions. These include the syndrome of heart failure with a reduced or preserved left ventricular ejection fraction, cardiomyopathy, ischemia, acute myocardial infarction, valvular heart disease and/or pulmonary hypertension etc.

Even at the most well-resourced setting, the process of acquiring, measuring, and analyzing the images is time-consuming and labor-intensive, making the routine echocardiography application unsustainable. Ground-breaking machine learning technology from Us2.ai utilises rigorously tested artificial intelligence (AI) algorithms to reduce the time to process and interpret echocardiograms from 30 minutes to under 2 minutes, with zero clicks, zero variability and with an accuracy comparable to expert clinicians[1].

"*The presence of AI in cardiology is growing by day, from risk score generation to screening to management. Advances in deep learning have made automated analysis of medical images possible,*" said Dr. Manesh Patel, Chief of Cardiology and Co-Director of the Heart Center at Duke University Health System. "*We look forward to continuing our pioneering efforts to bring AI-automation to our echo labs and clinics*."

Once an echocardiographer/sonographer acquires the necessary images for a study, the FDA and CE cleared Us2 software automatically performs a quality check while simultaneously classifying, annotating and analyzing all the heart chambers, using both 2D and Doppler views to create a full echo report with specific cardiac diagnoses.

"*This partnership accelerates our mission to automate the fight against heart disease*," said Dr. Carolyn Lam, Professor at Duke-NUS Graduate Medical School and co-founder of Us2.ai. "*At Us2.ai, we continue to expand our collaborative network worldwide to further test and refine our innovative technology in different clinical settings and health care systems. We are proud to partner with Duke University and strengthen our global ties in cardiovascular research which we hope ultimately will benefit patients worldwide."*

“*Even among the best specialists and heart care centers, the interpretation of echo images is subject to inter-and intra-reader variability and human error. The possibility of negating this variability with technology is necessary and exciting as it holds incredible potentials beyond cardiology clinic*s,“ said Dr. Madhav Swaminathan, Professor of Anesthesiology at Duke University and past President of the American Society of Echocardiography.

“*This advances Duke University’s efforts in digitalising clinical trials,”* said Dr. Sreekanth Vemulapalli, Associate Professor of Medicine, core faculty member of Duke-Margolis Center for Health Policy, and member of the Duke Clinical Research Institute. “*The US2 software could enable the use of echocardiography in screening or as a procedure at an accelerated pace and in a cost-effective manner.”*

Us2.ai software automated measurements include 2-dimensional (cardiac volumes, all 4 chambers of the heart), M-mode (e.g. tricuspid annular plane systolic excursion), spectral Doppler (blood flow across all valves, both PW and CW measurements) and tissue Doppler. This covers the vast majority of standard measurements for adult transthoracic echocardiography recommended by the American Society of Echocardiography, European Association of Cardiovascular Imaging, and British Society of Echocardiography.

About Us2.ai

Us2.ai uses machine learning to automate the fight against heart disease. The company’s software tools improve clinical decision making and cardiovascular research for clinical trials using echocardiography, the safest and most common cardiac imaging modality. Us2.ai connects institutions and imaging labs around the world on a platform of ready to use automation tools for view classification, segmentation and federated learning across diverse, anonymous patient and disease cohorts.

[1] Total time for interpretation of a study can depend on other factors such as the interpreting physician and preparation for uploading DICOMs for analysis.

Contacts

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