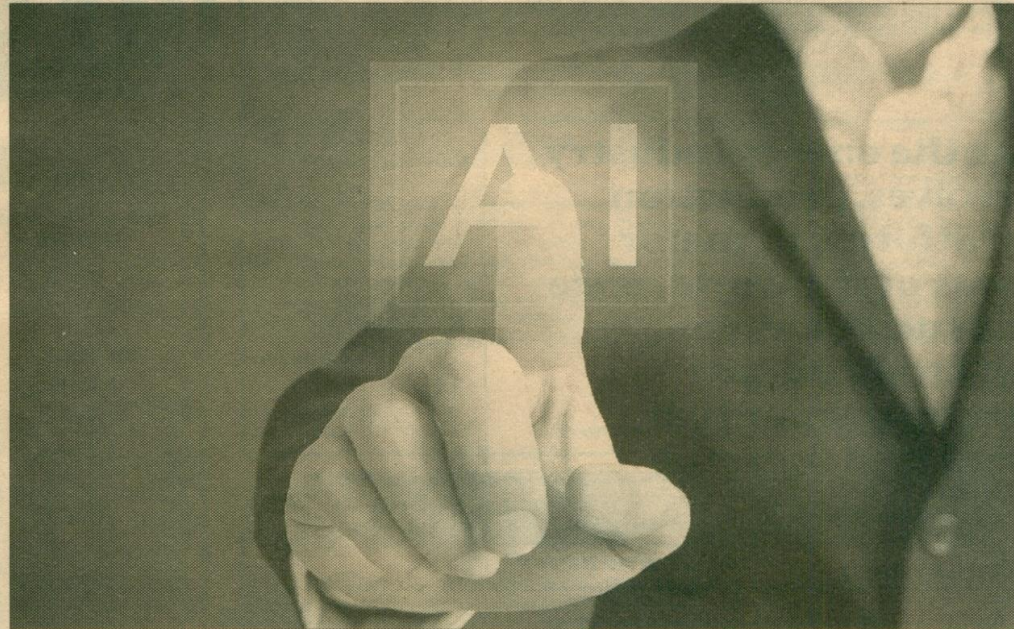


AI to scan organs, predict death



The latest trends in artificial intelligence highlight how algorithms can predict patient mortality almost 69% of the time

SO YOU THINK that robots are best suited for menial jobs? You couldn't be far from wrong. The research in artificial intelligence (AI) has moved to an all-new level with scientists at the University of Adelaide in Australia announcing that robots can predict mortality. By analysing CT scans from 48 patients, the deep learning algorithms could predict whether they would die within five years with 69% accuracy, which is broadly similar to the scores from human diagnosticians, the paper says. It will open up new avenues for the application of AI in medical image analysis, offering hope for early detection of serious illness that requires specific medical interventions.

AI in healthcare involves using algorithms and software for the analysis of complex medical data. With the current shortage of seven million physicians, nurses and other health workers worldwide, AI comes as a blessing. The primary aim of AI applications in healthcare is to analyse the complex relationships between prevention and treatment techniques. In the traditional set-up, a patient, when unwell, visits a physician who checks his/her vitals, asks questions

and prescribes medicines. A large chunk of clinical and outpatient services can now be handed over to AI assistants.

The use of AI in predicting mortality may enable doctors to tailor treatments for an individual based on their lifespan. When AI comes into the picture, medical outcomes will be predicted in a way that doctors are not trained to do. The automated systems will incorporate large volumes of data to detect subtle patterns.

For the study, the system was looking for things like emphysema. It has been trained to analyse over 16,000 image features that could indicate signs of disease in those organs. In the study, the goal was not to build a grim diagnostic system and the AI only analysed retrospective patient data. The research team is looking to lay the groundwork for algorithms that can

diagnose a patient's overall health rather than just spot a single disease. They are also encouraging more scans as a way to improve the results of future diagnostic systems.

There is another research led by a Florida State University researcher that makes an exponential advance in suicide prediction, potentially giving clinicians the ability to predict who will attempt suicide. The research's finding says machine learning, a future frontier for AI, can predict with 80- 90% accuracy whether someone will attempt suicide as far off as two years into the future. The algorithms become even more accurate as a person's suicide attempt gets closer. For example, the accuracy climbs to

92% one week before a suicide attempt when AI focuses on general hospital patients. The traditional risk factors identified over the past half-century to predict suicidal behaviour—such as depression, stress or substance abuse—could muster an accuracy rate not much better than random guessing.

The use of artificial intelligence in predicting mortality might enable doctors to tailor treatment for an individual based on his/her lifespan. When artificial intelligence comes into the picture, medical outcomes will be predicted in a way that doctors can't. The automated systems will incorporate large volumes of data to detect subtle patterns