Did you know a computer can...

Artificial intelligence (AI) has embedded itself into daily life and is used in many things, from working on computers and listening to music to cooking and painting.

CREATE FAKE VIDEOS

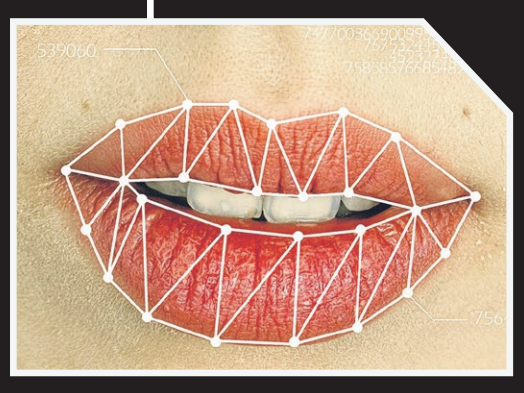
It is now possible to record the position of a person's head and his facial expressions, and overlay the image with an unrelated audio clip. Such videos, known as deep fake videos, have been used to target people in influential positions, such as politicians and celebrities, with the intention to spread misinformation.

PAINT A MASTERPIECE

Museums may soon display art made by not only people, but also by machines. In 2016, the art world saw a "new" Rembrandt painting, even though the artist had died more than 300 years ago. The piece, painted in Rembrandt's characteristic style, was done by a machine that had earlier analysed his 346 paintings using a mix of technologies, including facial recognition and 3D printing.

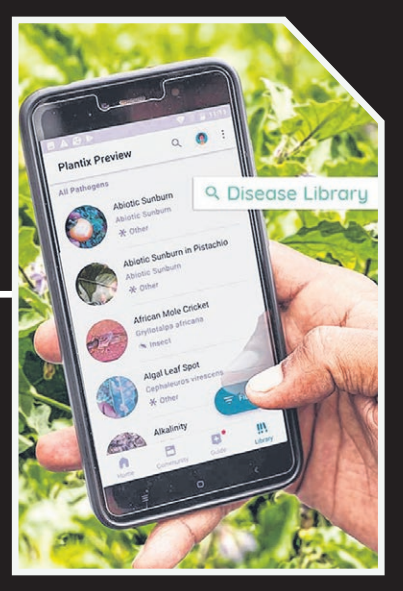
TELL YOU WHAT TO COOK

With Chef Watson, an AI-powered app by information technology company IBM, you will not have to fret about what to cook. Chef Watson's creators have added thousands of recipes to its library and the app uses natural language processing to analyse and generate the relevant recipes based on the user's choice of ingredients or craving.



LIP-READ

Lip-reading depends on many factors, such as the context of delivery, and even experts do not get it right all the time. But AI may be gaining the upper hand. In 2016, researchers at Oxford University found machine learning could discern speech from silent video clips more effectively than professional lip-readers. By identifying variations in mouth shape, the software deciphered correctly more than 90 per cent of what was said. Human lip-reading volunteers in the same task identified about 52 per cent of the words.

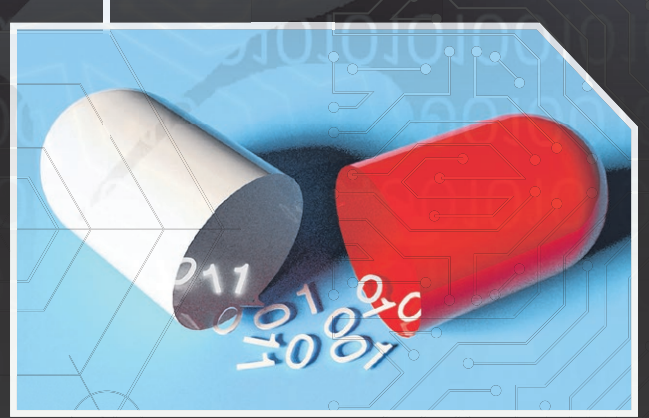


GROW A GREEN THUMB

Agriculture is about maximising crop yield and diseases that threaten crops can be bad news for farmers. But with AI-powered apps such as PlantVillage or Plantix, farmers can diagnose crop disease in the field. After they upload photographs of the sick plants, the apps' algorithms determine the problem and recommend possible solutions.

TALK LIKE A PERSON

Voice-recognition assistants like Apple's Siri and Amazon's Alexa are not new, but there are still issues with their ability to understand spoken English. Advances in AI, however, are set to change this, with updated assistants that can better understand the language's variations. For instance, Google's Duplex assistant has been shown to be able to understand English in any tone. It is said to also be able to simulate conversational tics in human speech.



MAKE MEDICAL BREAKTHROUGHS

By using software to automate drug testing in cells and scrutinise the results, American start-up Recursion Pharmaceuticals is trying to find new uses for existing medication. This may help those with rare illnesses. Last year, the company was reported to have identified 15 potential treatments for diseases affecting fewer than 200,000 people in the United States.

WRITE NEWS STORIES

Journalists may soon join the ranks of disgruntled workers whose jobs are being replaced by machines. In 2016, the Associated Press said it would be using AI to analyse data and write sports stories that will include basic game highlights and information. The news agency added that it had hired an automation editor last year to "explore additional solutions with Automation Insights". It is not the only one. During the 2016 Rio Olympics, The Washington Post used its automated robot reporter Heliograf to churn out about 300 short reports and alerts.

SOURCES AND PHOTOS: AGENCE FRANCE-PRESSE, GETTY IMAGES, IBM, J. WALTER THOMPSON AMSTERDAM, PLANTIX/FACEBOOK, YOUTUBE STRAITS TIMES GRAPHICS: LEE HUP KHENG, LIM KAILI