SINGAPORE UNIVERSITY OF TECHNOLOGY AND DESIGN

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11 -15 October 2021

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ARCHITECTURE

OMA Completes First Quadrant of KaDeWe Department Store in Berlin

"The first quadrant of OMA's Berlin KaDeWe department store transformation opened its doors to the public, revealing a new approach to retail design in the age of online shopping and shifting consumer behaviour. The masterplan divides the historic building, the largest department store in continental Europe, into four smaller, easily accessible and navigable sectors."

Source: Archdaily (9 October 2021)

ARTIFICIAL INTELLIGENCE

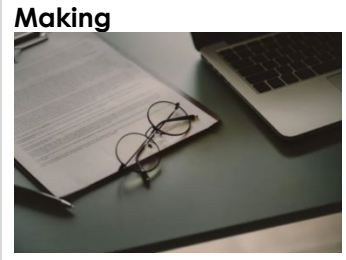
Brain Cell Differences Could Be Key To Learning In Humans And AI

"The new study found that by tweaking the electrical properties of individual cells in simulations of brain networks, the networks learned faster than simulations with identical cells."

Source: Imperial College London (6 October 2021)

AUTOMATED DECISION-MAKING

Perceptions of Fairness and Trustworthiness Based on Explanations in Human vs. Automated Decision-Making



"Automated Decision Systems (or ADS) are defined systems when an algorithm decides with minimum human involvement. ADS is gaining fast popularity in hiring, lending, policing, medicine, etc. ADS could be a useful tool to make decisions without bias."

Source: Technology Org (11 October 2021)

DRONES

Autonomous Racing Drones Dodge Through Forests at 40 kph

"In a paper published yesterday in Science Robotics, roboticists from Davide Scaramuzza's Robotics and Perception Group at the University of Zurich along with partners at Intel demonstrate a small, self-contained, fully autonomous drone that can aggressively fly through complex environments at speeds of up to 40kph."

Source: IEEE Spectrum (7 October 2021)

FOOD FRAUD

An Efficient And Low-Cost Approach To Detecting Food Fraud

"Fraudulent practices in food production, especially false claims of geographical origin, cause billions of dollars in economic damage every year. Botanists at the University of Basel have now developed a model that can be used to determine the origin of food in an efficient and low-cost manner."

Source: University of Basel (11 October 2021)

GREEN JOBS

Green Jobs For Physics Graduates: Finance And Economics

"With their mix of technical knowledge and problem-solving skills, physics graduates are ideally placed to tackle the world's environmental challenges. In the fourth of a series of articles, Laura Hiscott speaks to three physicists who are doing their bit to build a greener, more sustainable future in the field of finance and economics"

Source: Physics World (11 October 2021)

HEALTH CARE

Engineers 3D-Print Personalized, Wireless Wearables That Never Need a Charge

"The new devices, custom made to fit individuals, could mean massive improvements in the monitoring and treatment of diseases, the testing of new drugs and the ability to track personal health."

Source: University of Arizona (8 October 2021)

HEALTH DEVICES

Taking Steps Toward More Effective Fitness Trackers, More Physical Activity

"A new messaging approach developed by researchers in the College of Engineering and the College of Health and Human development applies tools used regularly in controlled systems engineering to behavior science to help fitness tracker users meet their goals."

Source: PennState University (7 October 2021)

PHYSICS

How Apples Get Their Shapes

"Apples are among the oldest and most recognizable fruits in the world. But have you ever really considered an apple's shape? Apples are relatively spherical except for that characteristic dimple at the top where the stem grows."

Source: Harvard (4 October 2021)

PHYSICS

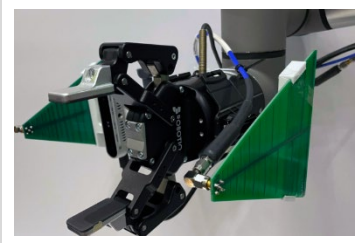
How Flawed Diamonds "Lead" to Flawless Quantum Networks

"Lead-based vacancy centers in diamonds that form after high-pressure and high-temperature treatment are ideal for quantum networks, find Tokyo Institute of Technology (Tokyo Tech) scientists. The modified crystal system could also find applications in spintronics and quantum sensors."

Source: TITECH (7 October 2021)

ROBOT

A Robot That Finds Lost Items



"Researchers at MIT have developed a fully-integrated robotic arm that fuses visual data from a camera and radio frequency (RF) information from an antenna to find and retrieve objects, even when they are buried under a pile and fully out of view."

Source: MIT (5 October 2021)

SOCIAL ROBOT

A Visit From A Social Robot Improves Hospitalized Children's Outlook

"A new study from UCLA finds a visit from human-controlled robot encourages a positive outlook and improves medical interactions for hospitalized children."

Source: EurekAlert! (8 October 2021)

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