

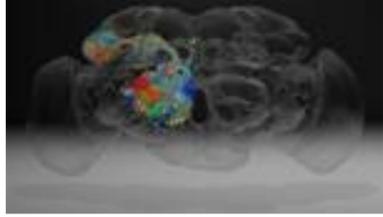
Weekly Discovery

We SHARE to inspire and ignite ideas!

23 July 2018 - 27 July 2018

3D IMAGING

This Is the Most Complete Brain Map to Date, Showing Every Single Neuron in a Fruit Fly's Brain



"A team has just created a HD, 3D picture of something a little smaller than the brain of a fruit fly. Showing every single one of the brain's 100,000 neurons, it's the most complete brain map ever created and leading to discoveries ..."

Source: [Science Alert](#) (22 July 2018)

4D PRINTING

This Textile's Twitching Tendrils Hint at a Future of Programmable Materials



"... the Active Textile, the largest working prototype of a new class of materials that respond to environmental stimuli on their own, no robotics involved."

Source: [Popular Science](#) (21 July 2018)

ARCHITECTURE

Algorithm Developed to Predict the Vertical Growth of Cities



"The algorithm uses historical and economic data from an urban area to predict what its future skyline will look like. It estimates both the number of high-rise buildings that will be constructed and where they are likely to be located."

Source: [Dezeen](#) (18 July 2018)

ARTIFICIAL INTELLIGENCE

AI 2020 Report: What Does Artificial Intelligence Look Like in the Future?



"This 27-page report details the research that was done across multiple industries to determine the opportunities, trends, and challenges that will reshape the enterprise over the next two years."

Source: [IT Brief](#) (23 July 2018)

ARTIFICIAL INTELLIGENCE

Hackers Easily Fooled Artificial Intelligences

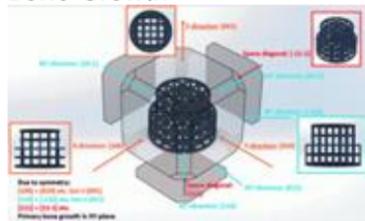


"AIs are surprisingly vulnerable to being spoofed. At the International Conference on Machine Learning, adversarial attacks were a hot subject, with researchers reporting novel ways to trick AIs as well as new ways to defend them."

Source: [Sciencemag](#) (20 July 2018)

BIOPRINTING

Researchers Test 3D Printed Lattice Structures as Implants to Facilitate Bone Growth



"Loss of bone due to injury or disease used to be a permanent condition, but that's not the case anymore – medical technologies including 3D printing are now capable of replacing or even restoring lost bone tissue."

Source: [3DPrint](#) (18 July 2018)

BIOTECHNOLOGY

'Smart Plants' Could Detect Deadly Radon and Mold in Your Home

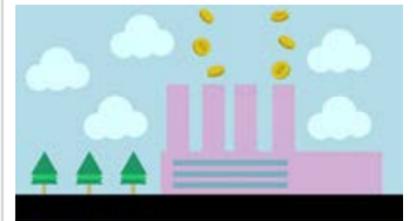


"Inspired by smoke detectors and smart home monitors, scientists are genetically engineering houseplants to sense harmful chemicals from mould and other kinds of fungi and alert homeowners to their presence." Also learn about these [houseplants](#) that monitor home health.

Source: [Sciencemag](#) (20 July 2018)

BLOCKCHAIN

IBM Thinks Blockchains Can Help Reduce Carbon Emissions



"Companies, governments, and others use what are called carbon offset credits to compensate for the carbon dioxide they emit ... Veridium has teamed with IBM to 'tokenize' carbon offset credits using the Stellar blockchain."

Source: [MIT Technology Review](#) (19 July 2018)

FINTECH

LATTICE80 Fintech 50 Singapore – Top Influencers

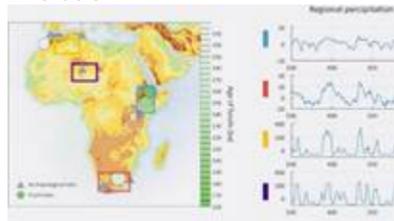


"LATTICE80 identifies some of the most important thought leaders who are creating an influence through action and impact in Singapore."

Source: [Lattice80](#) (20 July 2018)

IDEATION

How to Come Up with Better Ideas, According to Scientists Who Developed a New Theory of Human Evolution

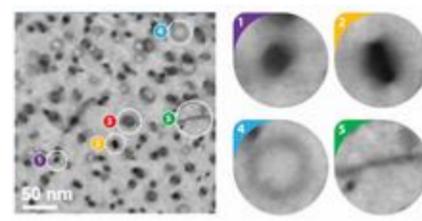


"A group of scientists have a new theory about how humanity came to be—and the story of how their theory came together is a lesson for the rest of us. It shows how breaking out of professional and ideological silos can lead to groundbreaking ideas."

Source: [Quartz](#) (16 July 2018)

MACHINE LEARNING

Eagle-Eyed Machine Learning Algorithm Outdoes Human Experts

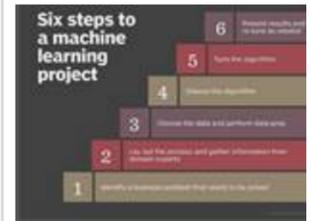


"Researchers from the University of Wisconsin–Madison and Oak Ridge National Laboratory have trained computers to quickly and consistently detect and analyze microscopic radiation damage to materials under consideration for nuclear reactors."

Source: [University of Wisconsin-Madison](#) (19 July 2018)

MACHINE LEARNING

How to Find the Best Machine Learning Frameworks for You



"Several machine learning frameworks have emerged to streamline the development and deployment of AI applications. These frameworks help abstract away the grunt work of testing and configuring AI workloads for experimentation, optimization and production."

Source: [TechTarget](#) (July 2018)

MEDICAL DEVICES

Innovations in Orthobiologics, Artificial Intelligence in Medical Diagnosis, Non-Invasive Health Monitoring, and Cybersecurity for Medical Devices



"Innovations in focus include a supercomputer to understand the functioning of the brain, ECG patch for atrial fibrillation diagnosis, through-the-skin monitoring of renal function, bone-grafting technology using small peptides, and use of machine vision and artificial intelligence for faster blood testing."

Source: [Frost & Sullivan](#) (20 July 2018)

PREDICTIVE ANALYTICS

Enabling Operational Efficiency Improvements Through Predictive Analytics

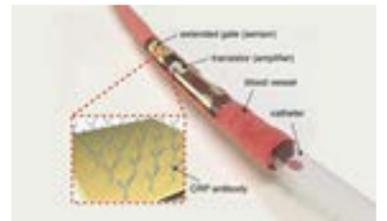


"With the advent of cloud computing, Internet of Things (IoT), heavy duty sensor technology, and high resolution downhole communication, predictive analytics gained popularity in the energy sector."

Source: [PwC](#) (2018)

SENSORS

A Real-Time Inflammation Sensor That Fits in a Catheter



"In the present study, a research team led by Dr. Paddy Chan Kwok-leung ... developed a sensor that detects and measures the amount of C-reactive protein (CRP) in the blood of human patients."

Source: [Asian Scientist](#) (20 July 2018)

WEARABLES

New Wearable Sensor Detects Stress Hormone in Sweat



"The prototype cortisol detection patch channels sweat into a reservoir; a membrane selectively lets charged ions through, and the amount of these ions detected can be translated into a reading of cortisol levels in the sweat."

Source: [IEEE Spectrum](#) (20 July 2018)