

Weekly Discovery

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5 November 2018 - 9 November 2018

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Artificial Intelligence & Data Science	Aviation	Cities
HealthCare	Robotics & Automation	Design & Innovation
Cybersecurity	Digital Design & Fabrication	Advanced Manufacturing

AGEING Is Singapore Aging Well?



"Are facilities the future of aged care in Singapore? What are the challenges Singapore Faces in terms of assuring the wellbeing of our ageing population into the future?"

Source: Cubes (Oct / Nov / Dec 2018)
Available @ SUTD Library (Call Number NA1 CUB)

AI & HEALTHCARE Investment in AI for Healthcare Soars



"Healthcare has become a major proving ground for AI capabilities ... The latest edition of KPMG Enterprise's Venture Pulse Report highlights the increasing excitement around the applicability of AI in healthcare."

Source: [KPMG](#) (1 November 2018)

AIR TRAVEL Rethinking the Future of Air Travel: Students and Fentress Architects Collaborate in Venice Biennale Exhibition



"In the European Cultural Center's biennial exhibition, students from North Carolina State University's College of Design worked alongside Curtis Fentress, Ana-Maria Drughi, and Joshua Stephens of Fentress Architects to propose innovative concepts for reshaping air travel."

Source: [ArchDaily](#) (4 November 2018)

ARTIFICIAL INTELLIGENCE New Deep Knowledge AI System Could Resolve Bottlenecks in Drug Research



Source: Britannica ImageQuest

"Researchers at the University of Waterloo have developed a new system that could significantly speed up the discovery of new drugs and reduce the need for costly and time-consuming laboratory tests."

Source: [EurekAlert!](#) (6 November 2018)

ARTIFICIAL INTELLIGENCE Using Deep Neural Networks to Hunt Malicious TLS Certificates



"A team of researchers at Cytera Technologies has recently proposed a neural network-based method for identifying malicious use of web certificates. It uses the content of transport layer security (TLS) certificates to identify legitimate certificates and malicious patterns used by attackers."

Source: [TechXplore](#) (2 November 2018)

AWARDS 2019 Breakthrough Prizes Honor Cutting-Edge Science and Math



"Scientists and mathematicians who are making strides in human health, developing new technologies, and expanding our knowledge of the cosmos are among the recipients of the 2019 Breakthrough Prizes."

Source: [National Geographic](#) (2 November 2018)

BIOTECH Breakthrough Neurotechnology for Treating Paralysis



"Three paraplegics who sustained cervical spinal cord injuries many years ago are now able to walk with the aid of crutches or a walker thanks to new rehabilitation protocols that combine targeted electrical stimulation of the lumbar spinal cord and weight-assisted therapy."

Source: [EPFL Mediacom](#) (31 October 2018)

DIGITAL FABRICATION 3D-Knitted Shells Save on Construction Materials and Time



"With just the press of a button, ETH researchers knit a textile that serves as the primary shaping element for curved concrete shells. Now they have used the new technology to create a five-tonne concrete structure for an exhibition in Mexico City."

Source: [ETH Zurich](#) (29 October 2018)

DRONES Fleets of Drones Could Aid Searches for Lost Hikers



"MIT researchers describe an autonomous system for a fleet of drones to collaboratively search under dense forest canopies using only onboard computation and wireless communication — no GPS required."

Source: [MIT News](#) (1 November 2018)

HEALTH Study of Cellphone Risks Finds 'Some Evidence' of Link to Cancer, at Least in Male Rats



"The experiment, by the National Toxicology Program, found positive but relatively modest evidence that radio waves from some types of cellphones could raise the risk that male rats develop brain cancer."

Source: [The New York Times](#) (1 November 2018)

HOLOGRAPHY MBA Students to Be Offered Hologram Lectures



"The use of the hologram technology also reflects how business schools are trying to add a wow factor to fend off the challenge not only from rivals but also from online learning courses that offer cut-price tuition."

Source: [Financial Times](#) (1 November 2018)

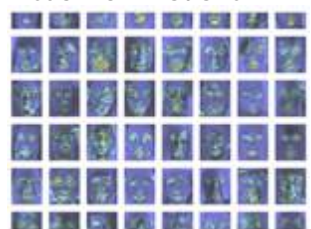
INTERNET OF THINGS The State of IoT Intelligence, 2018



"The study concentrates on end-user interest in and demand for business intelligence in IoT. The study also examines key related technologies such as location intelligence, end-user data preparation, cloud computing, advanced and predictive analytics, and big data analytics."

Source: [Forbes](#) (4 November 2018)

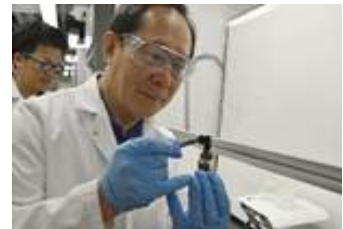
MACHINE LEARNING An Emotional Deep Alignment Network (DAN) to Classify and Visualize Emotions



"... a deep alignment network (DAN) model to classify and visualize emotions. Their method was found to outperform state-of-the-art emotion classification methods on two benchmark datasets."

Source: [TechXplore](#) (6 November 2018)

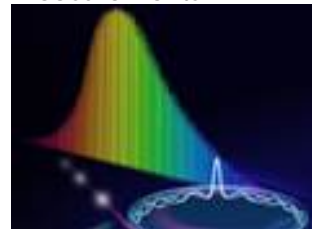
MATERIALS SCIENCE Inexpensive Material Offers Solution for Ocean Oil Spills



"Super-absorbent material could mitigate environmental impacts of spills, while allowing recovered oil to be reused."

Source: [The Pennsylvania State University](#) (1 November 2018)

PHYSICS Russian Physicists Upgrade Cheap Diode Laser for Use in Precise Measurements



"Physicists have developed a method for drastically narrowing the emission spectrum of an ordinary diode laser, like that in a laser pointer, for use in compact chemical analyzers that can fit into a smartphone, cheap lidars for self-driving cars, as well as security and structural health monitoring systems on bridges, gas pipelines, and elsewhere."

Source: [EurekAlert!](#) (2 November 2018)

SUSTAINABILITY Beyond Plastic Bans: Creating Products to Replace It



"The growing number of campaigns to ban plastic waste are putting pressure on companies to find alternatives not just for straws, but for all kinds of plastic packaging. So BillerudKorsnäs tests out products they hope to sell in the budding market for plastic replacements."

Source: [NPR](#) (2 November 2018)