

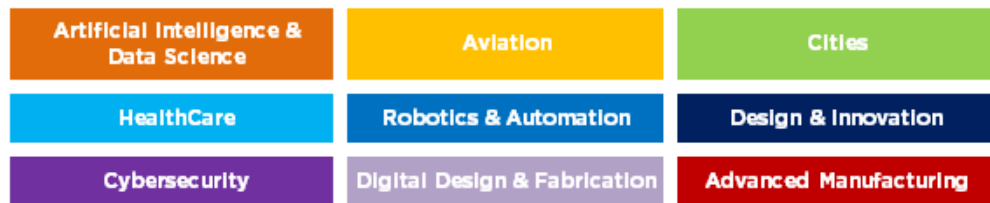
# Weekly Discovery

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20 July – 24 July 2020

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**ARCHITECTURE**  
**Flying-Taxi Startup Lilium Reveals Design For Urban Vertiports**



"Lilium aimed to design a simple, functional vertiport that only incorporated the elements vital for running its future aerial taxi service. The structure would be built from a series of prefabricated modules so that the scale of the vertiport can be adapted to its site and demand for the taxi services. Within cities, they could be built on top of office blocks or car parks."

Source: [Dezeen](#) (14 July 2020)

**BIOPRINTING**  
**KFC is working with a Russian 3D bioprinting firm to try to make lab-produced chicken nuggets**



"KFC is trying to create the world's first laboratory-produced chicken nuggets, part of its "restaurant of the future" concept, the company announced. The chicken restaurant chain will work with Russian company 3D Bioprinting Solutions to develop bioprinting technology that will "print" chicken meat, using chicken cells and plant material."

Source: [The Verge](#) (18 July 2020)

**CLIMATE CHANGE**  
**On Coronavirus And Climate Change**



Johns Hopkins University dashboard  
A global view of COVID-19 cases from the Center for Systems Science and Engineering at Johns Hopkins University (JHU)

"Powerful technologies like GIS make it possible to understand the origin and spread of disease, track the impact of climate change, and help experts identify real measurable solutions. Going forward, intelligent growth can help prevent epidemics, preserve biodiversity, and ultimately support sustainability for our planet."

Source: [Forbes](#) (17 July 2020)

**COVID-19**  
**Breakthrough: New Blood Test Detects Positive COVID-19 Result in 20 minutes**



"World-first research by Monash University in Australia has been able to detect positive COVID-19 cases using blood samples in about 20 minutes, and identify whether someone has contracted the virus."

Source: [Technology Networks](#) (19 July 2020)

**DATA**  
**New Technology Speeds Up Organic Data Transfer**



"An international research team, involving Newcastle University experts, developed a visible light communication (VLC) setup capable of a data rate of 2.2 Mb/s by employing a new type of organic light-emitting diodes"

Source: [Phys.org](#) (17 July 2020)

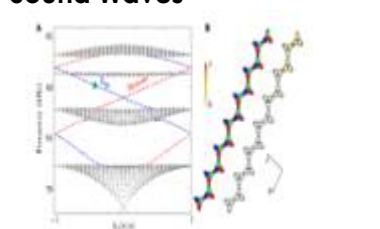
**DIGITAL HUMANITIES**  
**Digital Archaeology, Future Art Ecosystems, Virtual Fire Island**



"But this one considers new institutional models and studio practices, like the "art stack," a vertical structure exemplified by Tokyo-based collective teamLab, which combines experimental collaborative processes and exhibition spaces that are funded by ticketed experiences and can operate independently of art world infrastructures."

Source: [Art In America](#) (17 July 2020)

**ENGINEERING**  
**Scientists Achieve Major Breakthrough in Preserving Integrity of Sound Waves**



"In a breakthrough experiment, physicist and engineers have shown that it is possible to limit the movement of sound to a single direction without interruption even when there are deformations along the pathway." Read more in [Science Advances](#)."

Source: [EurekAlert!](#) (Jul 17 2020)

**GADGETS**  
**The Segway Is Dead, but Its Technology and Vision Lives On**



"The self-balancing that made the Segway just a little bit magical was adapted from the [iBOT](#), an all-terrain wheelchair that could balance on two wheels to bring users to standing height and even allow them to climb stairs."

Source: [IEEE Spectrum](#) (18 July 2020)

**MACHINE LEARNING**  
**Navigating 'information pollution' with the help of artificial intelligence**



"As part of a broader effort by his group to develop tools for navigating "information pollution," this platform is devoted to identifying the numerous perspectives that a single query might have, showing the evidence that supports each perspective and organizing results, along with each source's "trustworthiness," so users can better understand what is known, by whom, and why."

Source: [TechXplore](#) (17 July 2020)

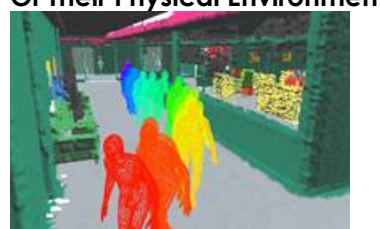
**MEDTECH**  
**Apps help orthopaedic patients prepare for surgery**



"Doctors around the country are now looking at ways they can remotely assist thousands of patients waiting for joint surgery. This includes the creation of apps and new tools to monitor patients in new and detailed ways."

Source: [BBC News](#) (19 July 2020)

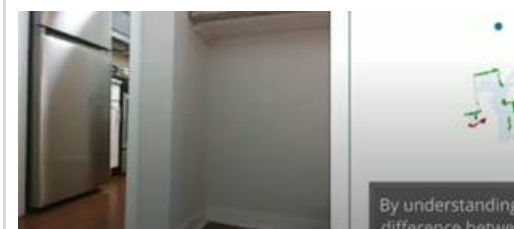
**NAVIGATION**  
**"Alexa, go to the kitchen and fetch me a snack" New Model Aims To Give Robots Human-Like Perception Of Their Physical Environments.**



"The new model, which they call 3D Dynamic Scene Graphs, enables a robot to quickly generate a 3D map of its surroundings that also includes objects and their semantic labels (a chair versus a table, for instance), as well as people, rooms, walls, and other structures that the robot is likely seeing in its environment. "

Source: [MIT News](#) (15 July 2020)

**NAVIGATION**  
**Which Way To The Fridge? Common Sense Helps Robots Navigate**



"A robot travelling from point A to point B is more efficient if it understands that point A is the living room couch and point B is a refrigerator, even if it's in an unfamiliar place. That's the common sense idea behind a "semantic" navigation system developed by Carnegie Mellon University and Facebook AI Research."

Source: [EurekAlert!](#) (20 July 2020)

**PROSTHETIC**  
**Space station motors make a robotic prosthetic leg more comfortable, extend battery life**



"A new robotic prosthetic leg prototype offers a more natural gait while also being quieter and more energy efficient than other designs."

Source: [University of Michigan](#) (15 July 2020)

**RECYCLING**  
**Nuts and Bolts—Perfecting the Plastic Recycling Process**



"In this system, a proprietary catalyst is used to convert a grinded mixture of organic and polyolefin-based plastic waste into carbon coke, nitrogen gas and water vapor. The catalyst enables the carbonization reaction to occur at 150-200°C and atmospheric pressure, making it a low energy process."

Source: [Asian Scientist](#) (13 July 2020)

**TECHNOLOGY**  
**10 Types of Innovation: The Art of Discovering a Breakthrough Product**



"After examining over 2,000 business innovations throughout history, Doblin uncovered that most breakthroughs don't necessarily stem from engineering inventions or rare discoveries."

Source: [Visual Capital](#) (1 July 2020)

**TECHNOLOGY**  
**Beetle-Mounted Camera Streams Insect Adventures**



"The team at the University of Washington in the US drew inspiration from the insects to create its low-powered camera system. Its beetle-cam can stream up to five frames per second of low-resolution, black and white footage to a nearby smartphone."

Source: [BBC](#) (17 July 2020)