C3.ai Digital Transformation Institute

IN THIS ISSUE: AI-driven floating seaweed farms, detecting brain injury, Storm King forecasting, acoustic DX, kids and vaccines

Carbon-capturing robotic seaweed farms 'like planting forests in the ocean'

Fast Company: UC Berkeley engineers are collaborating with the Bay Area startup Phykos on a DTI-funded project to pioneer a new form of carbon sequestration: using automated boats to grow seaweed in the middle of the ocean, then sinking it to the ocean floor. "It's a really challenging robotics problem," says postdoc **Marius Wiggert**.

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AI helps to detect brain injury earlier in survivors of cardiac arrest

UChicago news: University of Chicago researcher **Maryellen Giger**, who has studied computer-aided diagnosis for more than 30 years, has now expanded the use of a patent-pending deep learning technique developed for DTI-funded COVID research to better assess brain injury in survivors of cardiac arrest.

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The award-winning team forecasting 'Storm King' impact

The DTI-funded trio of atmospheric scientists modeling the movements of the Madden-Julian Oscillation (the Storm King of Earth's tropics) have been recognized with two NSF CAREER awards and an honorary doctorate from one of the oldest universities in the world for their work – all within the past six months.

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Do kids need a COVID-19 vaccine?

UIUC News: DTI researcher **Rebecca L. Smith**, an epidemiologist at the University of Illinois at Urbana-Champaign and one of 30 awarded the University of Illinois Presidential Medallion for work on UIUC's SHIELD testing program, offers advice about children and COVID-19 vaccines. COVID-19 is now "among the top 10 causes of death for U.S. kids this year," says Smith.
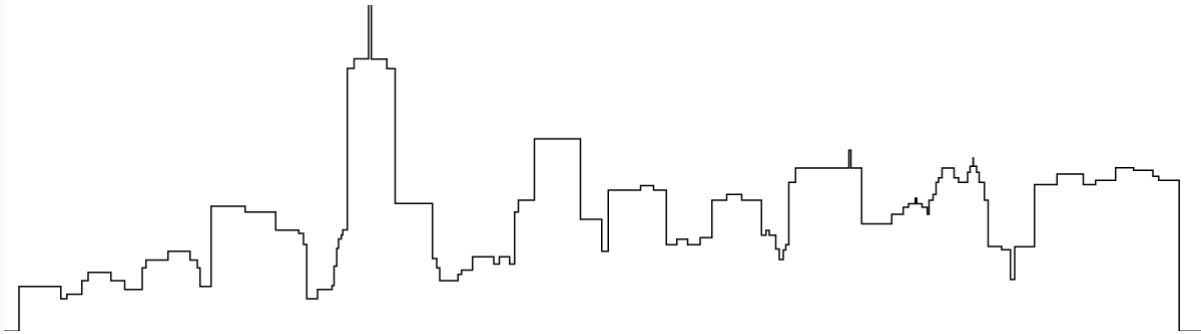
- Read more

Sounds like COVID

Using standard webcam audio, University of Illinois at Urbana-Champaign researchers led by **Narendra Ahuja** can distinguish a COVID cough from a non-COVID cough with more than 85 percent accuracy. An acoustic diagnostic system able to determine COVID-19 status from cough sounds alone would provide a low-cost, rapid, and remote alternative to current testing methods.

- Read more

Transforming the Built Environment

C3.ai DTI Co-Chief Scientist **Costas Spanos** led a two-day workshop in October featuring experts from around the world discussing the digital transformation of the built environment, including cost-effective AI systems, environmental impact, resilience at scale, and more. See videos of all sessions on our YouTube channel.

- See playlist

Watch all C3.ai DTI talks on our YouTube channel

YouTube.com/C3DigitalTransformationInstitute

The Science of Digital Transformation

About the C3.ai Digital Transformation Institute

Established in March 2020 by C3.ai, Microsoft, and leading universities, the C3.ai Digital Transformation Institute is a research consortium dedicated to accelerating the socioeconomic benefits of artificial

intelligence. The Institute engages the world's leading scientists to conduct research and train practitioners in the new Science of Digital Transformation, which operates at the intersection of artificial intelligence, machine learning, cloud computing, internet of things, big data analytics, organizational behavior, public policy, and ethics. The 10 C3.ai Digital Transformation Institute consortium member universities and laboratories are: University of Illinois at Urbana-Champaign; University of California, Berkeley; Carnegie Mellon University; KTH Royal Institute of Technology; Lawrence Berkeley National Laboratory; Massachusetts Institute of Technology; National Center for Supercomputing Applications at University of Illinois at Urbana-Champaign; Princeton University; Stanford University; and University of Chicago. Learn more at C3DTI.ai.

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