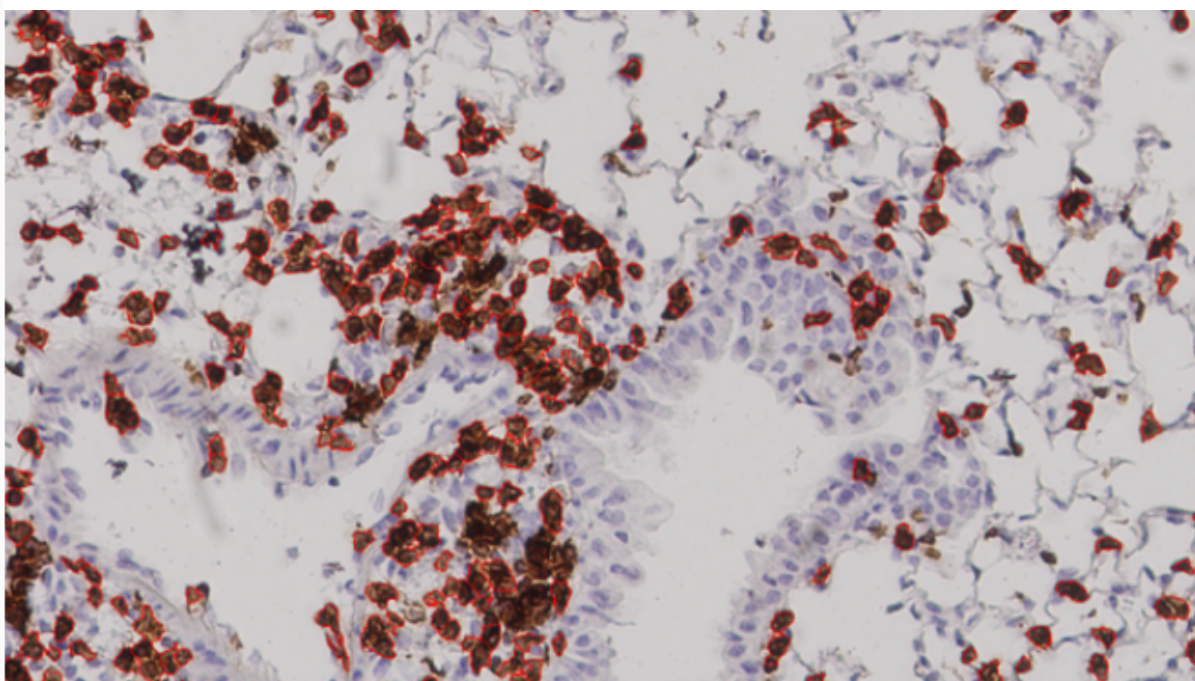# C3.ai Digital Transformation Institute

SPRING 2023

IN THIS ISSUE: 'Ultimate' COVID vaccine, Protecting Artists, Poverty Dx, Better Battery Blueprint, CZ Biohub Chicago

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The 'Ultimate' COVID Vaccine

C3.ai DTI PI and MIT Professor **David Gifford**, who dedicated a DTI 2020 COVID project award to develop new methods for vaccine design using the C3 AI Suite, has published results on a "radically different" COVID vaccine that may work not only against today's versions of the virus, but future variants as well. *Drug Discovery & Development* reports that "the new, novel vaccine could potentially help fight flu and cancer in the future."

- Learn more

Protecting Artists from AI Mimicry

University of Chicago Professor **Ben Zhou**, lead PI on two C3.ai DTI cybersecurity research projects, has lent his expertise to protect artists with his new tool "Glaze," designed to make miniscule changes to confound AI art generators. (Karla Ortiz art for UChicago)
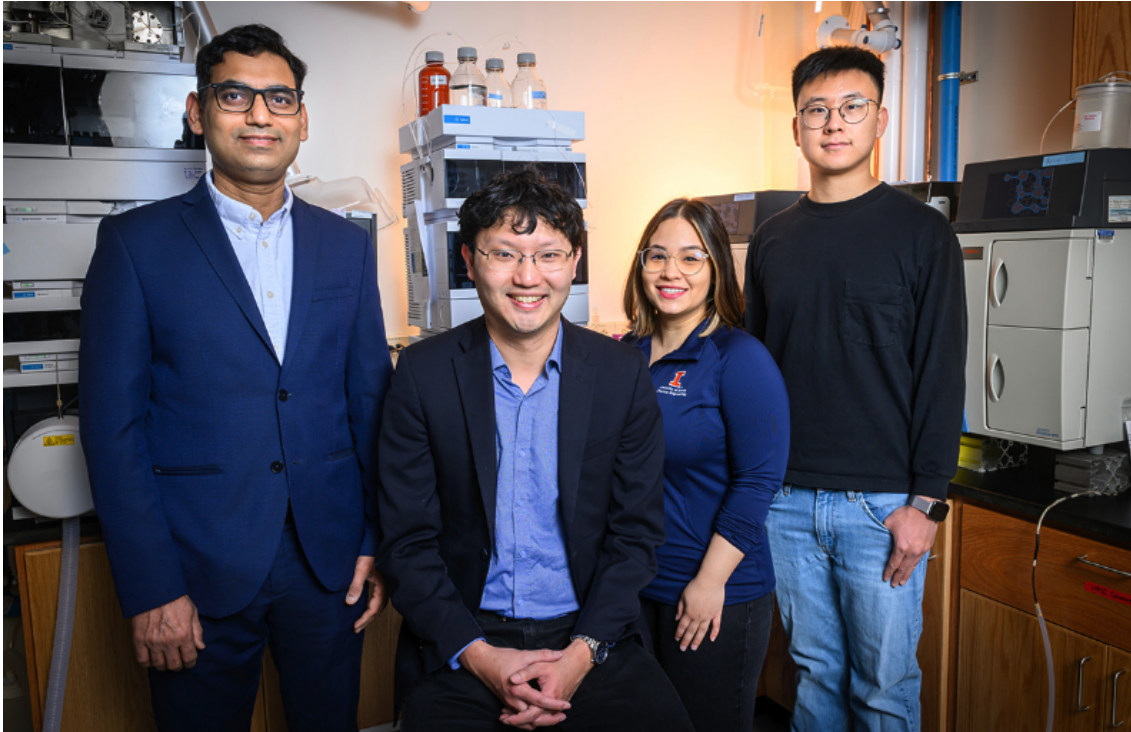
- Learn more

Why Poverty Persists in America

C3.ai DTI COVID Housing Precarity Co-PI **Matthew Desmond**, Pulitzer Prize-winning Princeton sociology professor who heads up the groundbreaking Eviction Lab there, examines housing and other sources of persistent poverty in America in a *New York Times* magazine feature. (Eugene RIchards photo for the *New York Times*)
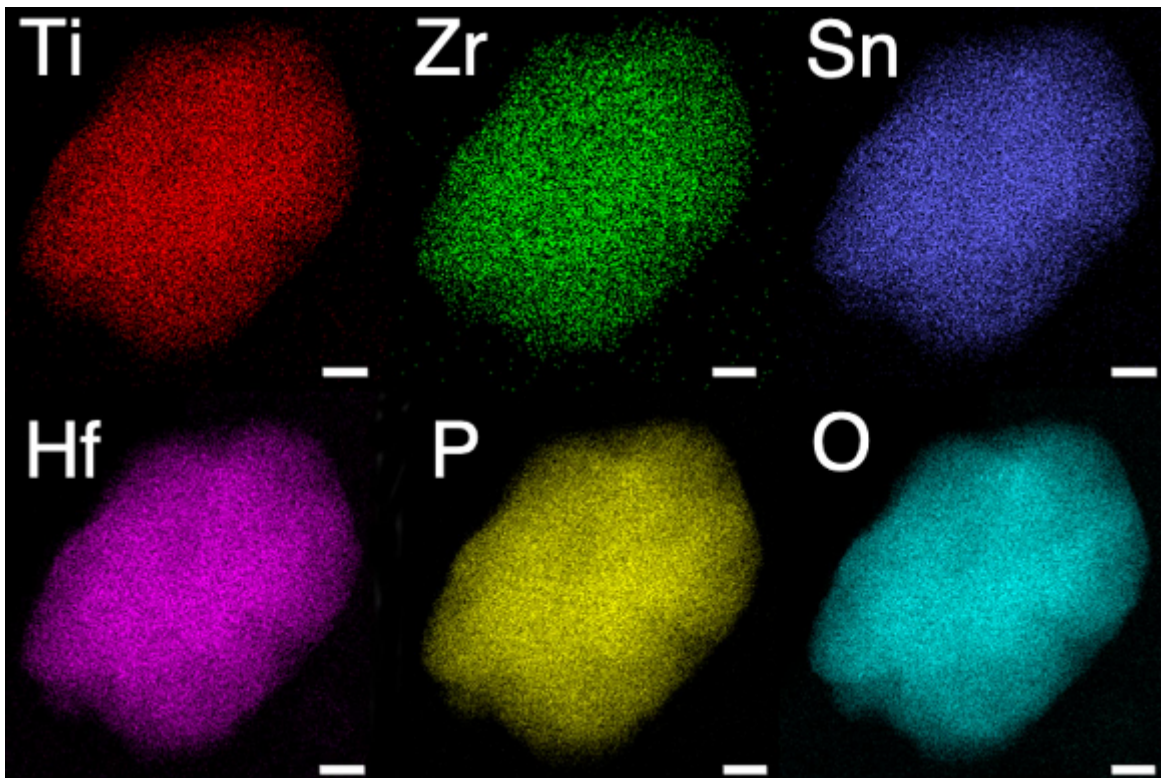
- Read more

'Forever' Chemicals? Not Anymore

UIUC News: C3.ai DTI researchers **Xiao Su** and **Diwakar Shukla**, engineering professors at the University of Illinois at Urbana-Champaign, collaborated on a study that verifies that electrochemistry – rather than filtration and harmful solvents – can remove short-chain PFAS from the environment and municipal water supplies. (L to R, D. Skukla, X. Su, A.R. Santiago, S. Yin - Fred Zwicky photo for UIUC)

- Read more

Better Blueprint for Solid-State Batteries

C3.ai DTI COVIDScholar PI **Gerbrand Ceder**, Berkeley Lab faculty senior scientist and UC Berkeley professor of materials science and engineering, leads a team designing a new blueprint for solid-state batteries that are less dependent on specific chemical elements, work that could advance solid-state batteries that are efficient and affordable.
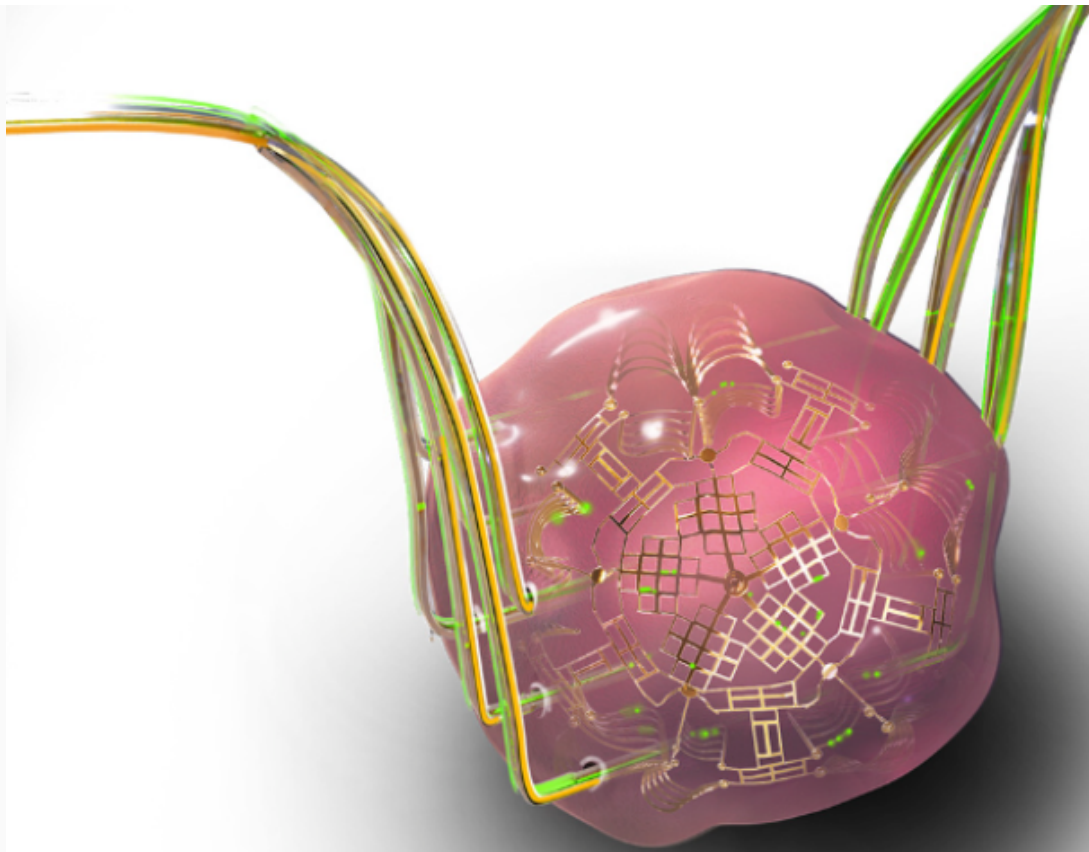
- Learn more

'We Are at an Inflection Point' with AI

MIT News: At a Congressional panel on March 8, Professor of Computing at MIT and C3.ai DTI Co-PI **Aleksander Mądry** urged lawmakers to ask rigorous questions about how artificial intelligence tools are being used by corporations, saying government should not "abdicate" its responsibilities and leave the future path of AI solely to Big Tech.

- Read more

Expanding the CZ Biohub Network

The University of Illinois Urbana-Champaign will be partnering with the University of Chicago and Northwestern University on the new Chan Zuckerberg Biohub Chicago. Operating from UIUC's National Center for Supercomputing Applications, C3.ai DTI will also take part in the new biomedical hub's activities. (Janet Sinn-Hanlon graphic for UIUC)
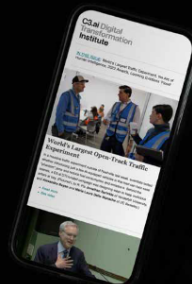
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About the C3.ai Digital Transformation Institute

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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