Carnegie Mellon University

Open Source AI and Automated Science

Sayeed Choudhury
Director of Open Source Programs Office
Executive Director of the Open Forum for AI (OFAI)

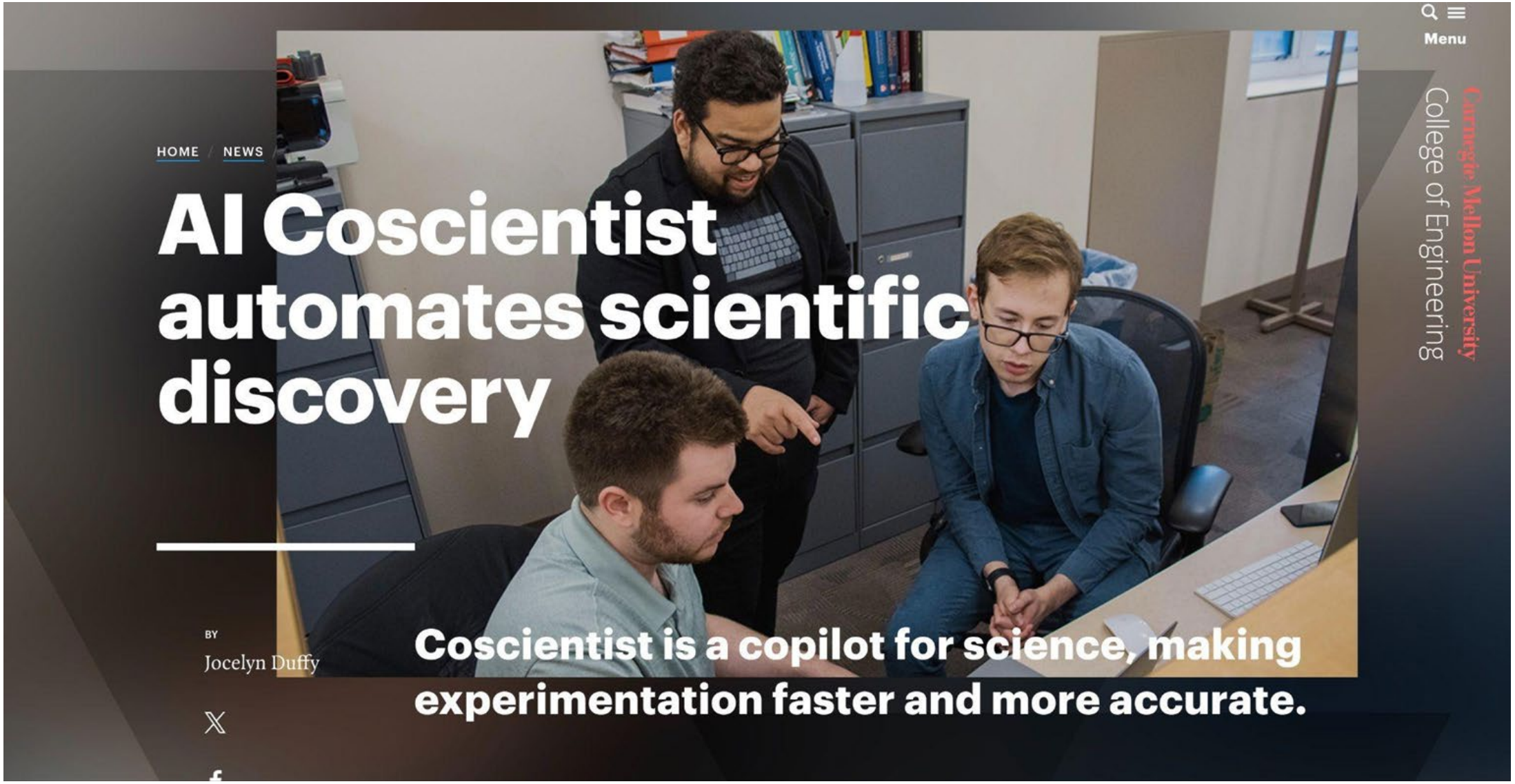
Edinburgh Open Research Conference 2025

Transforming Science and Engineering to Solve Humankind's Biggest Challenges

Complicated challenges like chronic disease, food security and climate change can't wait for science as usual. Carnegie Mellon University is reshaping the future of science by pairing human expertise with safe and trustworthy AI, computation and automated laboratories to revolutionize the way researchers work.

By connecting breakthrough technologies across the physical and virtual worlds — using automated laboratories, powerful foundation AI and physics-based models driven by high-performance computing and multimodal data resources — scientists can solve problems that were previously too complex to tackle.

> "Advancing AI capabilities in science and engineering not only accelerates the pace of innovation, it makes breakthroughs possible that could have never happened before AI became a partner in human discovery and data analysis." — Theresa Mayer, Vice President for Research


Menu
Carnegie Mellon University
College of Engineering
HOME / NEWS /
AI Coscientist automates scientific discovery
BY
Jocelyn Duffy
Coscientist is a copilot for science, making experimentation faster and more accurate.

From Proprietary to Open Source

- Originally began with Emerald Cloud Lab – a proprietary system established by CMU alumni for San Francisco Bay Area startup companies
- Included some important open science decisions
- But eventually concluded that we need a new approach, beginning with, and embracing open science from the onset
- Key questions include how, when, what to share, and with whom?
- Auditing and provenance opportunities with AI/ML
- What should change, and what should not change?

Open Forum for AI (OFAI)