Advancing Data Science & Artificial Intelligence

Data science and artificial intelligence (AI) have a footprint in almost every industry. This discipline not only plays a role in commerce and corporate decision-making but also generates insights and information in sectors such as medicine, environmental science, and social science to accelerate the pace of scientific discovery and identify gaps in our knowledge and understanding.

The University of Chicago leverages its eminence in the sciences and its culture of inquiry to play a leading role in defining this field. At UChicago, data science encompasses a holistic view of the data life cycle, from collection and market valuation to information extraction, machine learning, and societal impact.

The University's expertise in statistics, computer science, and applied mathematics, coupled with its strengths in ethics, philosophy of science, and economics, enables UChicago to develop a distinctive approach to data science and artificial intelligence that accelerates its world-changing potential.

Cutting across Disciplines

UChicago's foundations-first approach to data science uncovers the emerging fundamentals to advance key challenges in data science and AI across disciplines. Data science and AI research can be found across the UChicago campus, from the social sciences and public policy to medicine and biology, from business and economics to linguistics and digital humanities.

AI has the potential to uncover new laws of nature, design better experiments, guide scientific measurement, optimally leverage physical models, and develop new theories and methods. The AI + Science Initiative transforms scientific discovery and seeks to remove the barriers between fields to exemplify a new way forward for scientific and technological innovation. Bringing together researchers from nearly all departments at UChicago, scientists from Argonne National Laboratory, Fermi National Accelerator Laboratory, and the Toyota Technological Institute at Chicago, the AI + Science initiative convenes one of the largest concentrations of experts in the nation.

DATA SCIENCE & AI ADVANTAGE

- Leaders in open-source biomedical data infrastructure, with over 30+ data commons and over 22 PB of data

- AI + Science Initiative opens new path for scientific discovery and innovation

- Part of the $148 million Eric and Wendy Schmidt AI in Science Postdoctoral Fellowship program

- UChicago-City Colleges of Chicago Data Science Preceptorship program works to diversify the field of data science professionals and educators

- Home to Transform, an accelerator for startups focused on new technologies in data science and AI

- Affiliation with Argonne National Laboratory, home to Aurora, one of the fastest supercomputers in the world

Impactful Partnerships

UChicago has developed state of the art infrastructure for securely storing, amalgamating, integrating, and analyzing HIPPA-compliant data from academic, corporate, and private institutions nationwide. UChicago has 30+ data commons, including over 22 PB of data and more than 2 million research subjects. This type of infrastructure will be essential for the type of multi-institutional effort that will be required to train the next generation of AI models focused specifically on biology and medicine.

UChicago is part of the Data Science for Social Impact (DSSI) Network, a consortium of diverse higher education partners, including minority-serving institutions, working to broaden STEM participation and amplify social impact through data science.

The UChicago-City Colleges of Chicago Data Science Preceptorship Program places recent PhD graduates in teaching roles at both institutions and provides them with faculty mentoring and training in creating effective and inclusive learning environments.

Research Spotlight

Rebecca Willett, Worah Family Professor in the Wallman Society of Fellows and the Departments of Statistics and Computer Science, is pioneering machine learning and signal processing methods in fields as diverse as weather patterns, astrophysics research, and corn production quality.

Holistic Education & Inclusive Training

UChicago provides a comprehensive education in data science and artificial intelligence that offers fundamental skills training and domain-specific applications. We are one of nine universities chosen worldwide to participate in the $148 million Eric and Wendy Schmidt AI in Science Postdoctoral Fellowship, which fosters and trains the next generation of AI-driven scientists.

Through the Committee on Data Science, UChicago trains undergraduates and graduate students in the mathematical foundations of data science, advanced computational methods, and ethical and responsible data use. Additionally, through the Data Science Clinic, students gain unique experiential learning opportunities to work with real-world clients from industry, academia, and social impact organizations. Furthermore, UChicago has a deep commitment to making data science education inclusive to all, offering multiple programs aimed at bridging educational gaps in historically underserved communities and helping to increase data science capacities at non-profit organizations.

PARTNER WITH US

Corporate Engagement
DSI Industry Affiliates Program
Data Science Clinic
Transform Data Science & AI Accelerator

CONTACT US

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DATA SCIENCE & AI AT-A-GLANCE

100+
Faculty

5
Programs and Degrees

11
DSI Postdoctorate researchers

8
DSI Industry Affiliates

50+
Schmidt Futures Fellows over a five-year span