The University at Buffalo is a national leader in artificial intelligence (AI). With over four decades of experience in AI and more than 200 faculty at work on an array of AI projects, UB continues to push AI's capabilities and applications, all with a singular aim of solving societal challenges.

UB's Expertise in Artificial Intelligence

National AI Institute for Exceptional Education

CLOSING EDUCATIONAL GAPS TO CREATE INCLUSIVE LEARNING

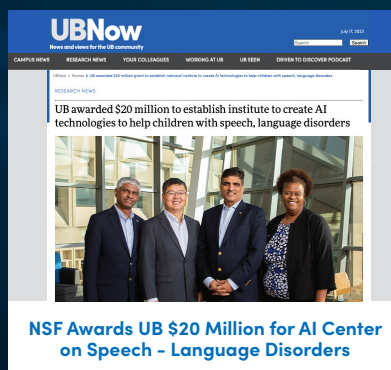The National AI Institute for Exceptional Education is one of 25 National AI Research Institutes. It is led by UB and funded by the National Science Foundation (NSF) and the U.S. Department of Education's Institute of Education Sciences (IES). The Institute is a partnership including eight universities: Cornell University, Georgia Institute of Technology, Pennsylvania State University, Stanford University, University of Illinois Urbana-Champaign, University of Nevada – Reno, University of Texas at El Paso and University of Washington.

The five-year, $20 million effort addresses the nationwide shortage of speech-language pathologists and supports children ages three to ten who are at risk for academic and socioemotional delays.

"...being chosen by the National Science Foundation to lead this impactful initiative underscores the pivotal role our world-class researchers play in addressing society's most pressing challenges,"

– UB President Satish K. Tripathi

$20M

NSF Awards UB $20 Million for AI Center on Speech – Language Disorders

Institute for Artificial Intelligence and Data Science (IAD)

IAD brings together researchers, labs, institutes and centers of excellence focused on advancements in AI, data science and related areas of research to tackle complex problems.

Research ranges from discovering new classes of volcanoes in the Pacific Rim of Fire, accelerating the next generation of novel mechanism-driven immune-based cancer prevention and therapies to understanding how social media can improve search and rescue during natural disasters.

Center for Unified Biometrics and Sensors (CUBS)

CUBS advances biometric technologies, integrating pattern recognition and machine learning with sensors technology. The Handwriting Interpretation System used by the United States Postal Service was pioneered by CUBS. Researchers are developing new technologies that will outsmart spambots by making web services more secure.

Center for Early Literacy and Responsible AI (CELaRAI)

SUPPORTING YOUNG LEARNERS FOR FUTURE SUCCESS

Supported by a five-year, $10 million grant IES, CELaRAI is harnessing the power of AI to transform early literacy instruction for children in kindergarten through second grade. CELaRAI is led by UB in partnership with East Carolina University, Michigan State University, Stanford University, University of California, Los Angeles and University of Illinois Urbana-Champaign.

UB is Home to Empire AI

NATIONAL EPICENTER FOR AI RESEARCH AND INNOVATION

Empire AI, the $400 million New York State-wide consortium, aims to put New York at the forefront of the AI revolution, including the construction of a new state-of-the-art computing center at UB.

In addition to UB and fellow SUNY university centers – the consortium is comprised of the City University of New York, Columbia University, Cornell University, New York University, Rensselaer Polytechnic Institute, the Flatiron Institute and philanthropic partners.

> **UB has been leveraging AI for the public good for decades—and, in the process, gaining renown as a pioneer of machine learning,"** said President Satish K. Tripathi.
>
> **"Today, UB stands at the center of AI research and responsible application."**

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Center for Information Integrity (CII)

ADDRESSING MISLEADING INFORMATION ONLINE

CII is a multidisciplinary research team that develops digital literacy tools and teaching techniques to improve information accuracy. The center developed the DeepFake-o-Meter, a free, open-source, web-based platform that combines several state-of-the-art, deepfake-detection algorithms.

Deception Awareness and Resilience Training (DART)

EMPOWERING VULNERABLE POPULATIONS

With a $5 million grant from the NSF Convergence Accelerator, DART created online tools and gaming strategies to identify potential exploitation and deception, empowering seniors to avoid falling victim to scams.

Venu Govindaraju, PhD

Vice President for Research and Economic Development

Venu Govindaraju, PhD, is UB's Vice President for Research and Economic Development, SUNY Distinguished Professor in Computer Science and a nationally and internationally recognized research scientist in artificial intelligence who pioneered the Handwriting Interpretation System now used by USPS. Serving on the SUNY AI Taskforce as co-chair, he is developing a 5-year strategy for harnessing AI in education, as well as training across SUNY to create a highly skilled NYS workforce in AI. Govindaraju has garnered more than $95M in research funding – including $20M from the National Science Foundation and the Institute of Education Sciences (IES) – to establish the National AI Institute for Exceptional Education, for which he is Director and PI.