

The New York NeuroAI (NYNA) Institute

\$50M Investment to Launch Artificial Intelligence Collaborative

Stony Brook University (SBU) and Cold Spring Harbor Laboratory (CSHL) seek \$50 million in New York State infrastructure support to launch a research collaborative aimed at developing the next generation of artificial intelligence (AI) methodologies. The goal: To forge a bi-institutional partnership focusing on the most pressing challenges facing AI development for all aspects of life sciences, human health, technology and environmental conservation.

Regional Economic Impact (Combined and Projected) Construction FTE Jobs: 500 Science/Technology Jobs: 235 Spin-out Ventures: 10–20



COLD SPRING HARBOR L A B O R A T O R Y

Groundbreaking Collaboration

The NYNA Institute is a coalition between CSHL and SBU to cultivate a new field in artificial intelligence called NeuroAI.

This groundbreaking collaboration combines research in Al and neuroscience to catalyze advancements in our understanding of brain function and the development of new machine learning algorithms. We will expand and invigorate research activities across New York State by empowering experts in Al, computer science and neuroscience.

The NYNA Institute will build a comprehensive training pipeline to nurture a diverse community of scientists fluent in both Al and neuroscience within the New York State biotech ecosystem.

Global recruitment for the program has already begun, with the NYNA Institute set to start bringing top AI researchers to the Long Island region before the end of 2021.





Al and Neuroscience at Stony Brook University

SBU combines expertise in machine learning and algorithm development with experimental and computational research in neuroscience and neurotechnology, aimed at tackling grand challenges to advance healthcare and promote workforce development in New York.

The University's Institute for AI-Driven Discovery and Innovation draws on leading investigators from the computer science, biomedical informatics, applied mathematics and statistics, neurobiology and behavior, and the electrical and computer engineering departments. The Institute serves as a hub for research spanning engineering and human health and cybersecurity, and to educate the workforce of the future.

SBU's Center for Neural Circuit Dynamics brings experimental and computational experts together to understand the complex information processing in the animal brain and harness its power with neuro-inspired artificial neural network architectures. The strength of these institutes and centers is complemented by a large community of neuroscientists across multiple schools and departments, whose interests focus on understanding the links between the brain and behavior in health and disease.

Neuro-Al Center at Cold Spring Harbor Laboratory

CSHL is connecting its world-renowned neuroscience research program and its study of brain mechanisms to the development of AI platforms. Its proposed Neuro-AI research building will be a cornerstone of the laboratory's seven-acre, \$300 million campus expansion. This center will bring together AI experts with leading neuroscientists to foster a unique program at the intersection of these fields. CSHL has already established a scientific advisory board for its Neuro-AI Program with leaders from within the technology industry, including Facebook, DeepMind for Google and Numenta, to establish Long Island as the birthplace of Neuro-AI.

Building for the Future of Al Research

The collaborative's need for \$50 million from New York State will support the construction of new facilities on CSHL's and SBU's campuses that will house unique programs focusing on the next generation of AI research.

Photos, left to right: Aerial view of Cold Spring Harbor Laboratory; Associate Professor II Memming Park (Neurobiology and Behavior) meets with graduate student researchers to develop computationally efficient optimization techniques for modeling brain function; aerial view of Stony Brook University

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