

Field Day: AI Institutes for Agriculture



Agricultural Genome to
Phenome Initiative



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AI and Agriculture

Tackling the challenges of 21st century agriculture will require a fundamental shift in the way we envision the role of artificial intelligence (AI) technologies. Lead PIs of two of the 18 recently established Artificial Intelligence (AI) Research Institutes will provide an overview and goals of their institutes and discuss the synergistic work that can evolve from these projects. The AI institutes were established by USDA-NIFA and the National Science Foundation (NSF) to pursue transformational advances in a range of economic sectors, science and engineering fields.

AgAID Institute

Western U.S. farmers and policymakers face variable profitability, crop loss and poor crop quality owing to increased labor costs and fewer skilled workers, weather and production uncertainties, and water scarcity. The AgAID Institute, led by researchers at Washington State University, is guided by a mantra of adopt-adapt-amplify: adoption as a first principle in AI design, adaptability to changing environments and scales, and amplification of human skills and machine efficiency. AgAID activities include: using AI applications as testbeds for developing innovative ag technologies and workflows; serving as a nexus for collaborative transdisciplinary learning; preparing the next generation workforce for careers; and facilitating technology adoption and transfer.

AI Institute for Resilient Agriculture (AIIRA)



AIIRA Institute, based at Iowa State University, allows researchers to develop digital twins of individual crop plants and entire farm fields, helping plant breeders improve crop varieties and farmers boost production. The researchers behind AIIRA believe their work can accelerate the productivity and sustainability of agriculture at a time when the world's population is increasing, cropland is decreasing and the climate is changing. The institute will also educate students, scientists, business people and farmers to understand and use these new digital tools to help them make better decisions.

Presenters:

Ananth Kalyanaraman is lead PI and director of AgAID Institute. He is Boeing Centennial Chair in Computer Science at Washington State University, Pullman. He holds a joint position at Pacific Northwest National Lab and affiliate faculty positions at the WSU Molecular Plant Sciences Graduate Program and the Paul G. Allen School for Global Animal Health.



Baskar Ganapathysubramanian leads AIIRA institute. He is the Joseph C. and Elizabeth A. Anderlik Professor in Engineering at Iowa State University. He also the associate chair for research in the ISU mechanical engineering department.

August 18, 2021

10:30 AM–12:00 PM
(Central Time, -5 GMT)

Purpose

To introduce two new NSF & USDA-NIFA supported Artificial Intelligence Research Institutes that focus on AI in Ag.

Register for this Zoom virtual meeting:

<https://tinyurl.com/AG2PI-FD10>

Upon registration, you will receive a confirmation email with information about joining the meeting.

A recording will be available at a later date at: ag2pi.org/



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