



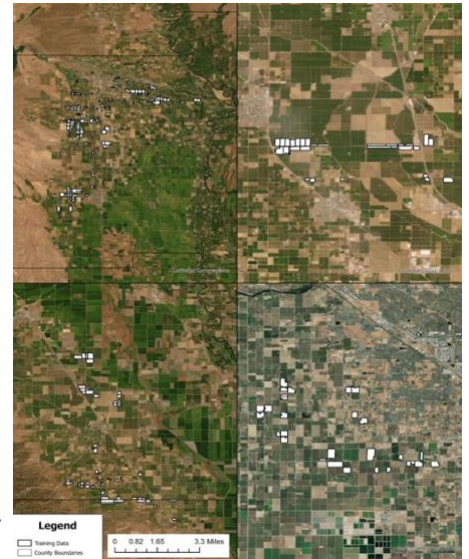
# CALIFORNIA VIEW 2023 - 2024

**AmericaView**<sup>SM</sup>  
Empowering Earth Observation Education  
[americaview.org](http://americaview.org)

## CALIFORNIA VIEW 2023-2024 ACTIVITIES

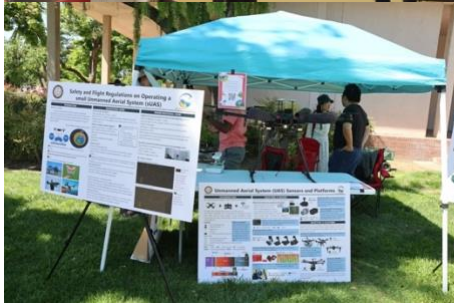
CaliforniaView's vision is to promote and advance remote sensing education within the state of California utilizing predominantly USGS Landsat data sets to solve societal problems. It has become the state's go-to remote sensing educational resource since 2012. In GY 2023, CaliforniaView's applied research focused on the state's 1.5 million acres of almond orchards, the cover cropping (CC) in particular as a strategy for regenerative orchard systems and soil conservation. Our graduate student prototyped the machine learning algorithm to map the presence of winter cover crops using time series of Sentinel-2 multi-spectral imagery. A pilot study was also done to estimate CC biomass with UAV photogrammetry and multi-spectral imagery. These remote sensing based cover crop monitoring will help us to understand the adoption rate of CC practice in almond orchards and assess its carbon benefits.

Fig. 1 Example of almond orchards with cover crops (white) in four counties.



### STEM workforce development via High School Summer Camp on AI-Remote Sensing-Robotics.

CaliforniaView partnered with the AI Institute for Next Generation Food Systems (AIFS), organized and hosted our first summer camp targeting high school STEM students from greater Sacramento and Bay area. The camp showed how AI and remote sensing are being applied in agricultural and environmental monitoring, and exposed students to new career paths. Hands on fun activities included IoT programming microcontrollers connected to different types of sensors and flying AI-enabled drones over a vineyard.



**Public engagement with remote sensing technology.** CaliforniaView continues outreach activities with various stakeholders including large growers, commodity industry, non-profits, and state agencies. We also hosted exhibitions at the annual University Open House with more than 35,000 visitors. Various drone platforms and imaging cameras were showcased. Poster presentations and thermal imaging photo booth also attracted many visitors, demonstrating the UAV applications in sustainable agriculture and the concept of thermal remote sensing.

CaliforniaView is a member of the AmericaView Consortium, a nationally coordinated network of academic, agency, non-profit, and industry partners and cooperators that share the vision of promoting and supporting the use of remote sensing data and technology within each state. AmericaView is funded by USGS grant agreement G23AP00683.

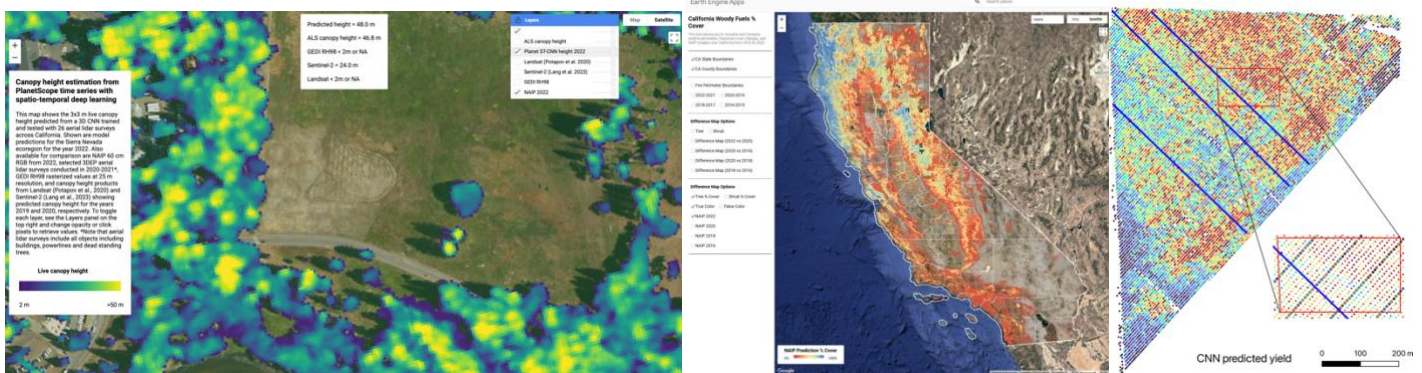
**AmericaView**<sup>SM</sup>  
Empowering Earth Observation Education  
[americaview.org](http://americaview.org)

AmericaView Website:  
[www.AmericaView.org](http://www.AmericaView.org)  
Christopher McGinty, Executive Director:  
[chris.mcginty@americaview.org](mailto:chris.mcginty@americaview.org)  
Lisa Wirth, Program Manager:  
[lisa.wirth@americaview.org](mailto:lisa.wirth@americaview.org)  
Lindi Quackenbush, Board Chair:  
[lquack@esf.edu](mailto:lquack@esf.edu)

## BENEFITS TO CALIFORNIA

California's landscape is ecologically and climatological diverse, vulnerable to warming, drought, and wildfires. As a most productive agricultural state, it also faces the challenge of minimizing water and N use while maximizing the yield. CaliforniaView has been contributing to cost-effective monitoring across scales with remote sensing technology and facilitate data-driven adaptive management for sustainable natural resource and agriculture. Our research, education and outreach activities have benefited a broad range of stakeholders by

- Demonstrating and providing support to state agencies and the specialty crop industry on satellite and UAV remote sensing technology and AI.
- Training students from multiple disciplines via targeted curriculum development, mini project mentoring, and workshops to equip next generation workforce with remote sensing foundation and tools.
- Educating broader audience including high school students about the benefits and recent advancements of remote sensing and AI applications.
- Showcasing and sharing multi-scale remote sensing framework and workflow for upscaling drone-based sensing with high resolution satellite imagery, to support better-informed decision making across scales.



## CALIFORNIA VIEW CONSORTIUM MEMBERSHIP



*Federal consortium members identified above do not receive funding from AmericaView.*

CaliforniaView Principal Investigator:

Dr. Yufang Jin

University of California, Davis

(530) 219 4429

yujin@ucdavis.edu



<http://www.calview.ucdavis.edu>



Facebook.com/CalView



@CalView