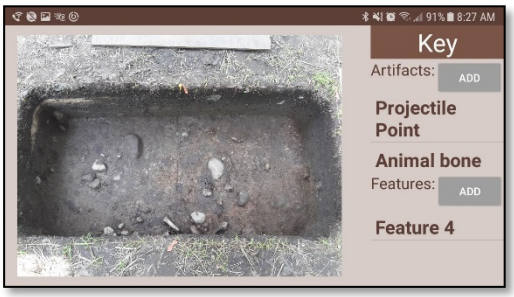
INDIANAVIEW 2019 - 2020

INDIANAVIEW 2019 - 2020 ACTIVITIES

IndianaView student scholarship program

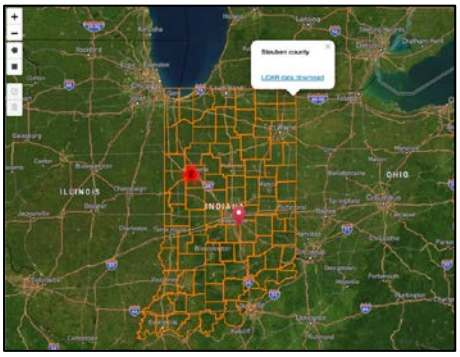
IndianaView provided scholarships for eight undergraduate and graduate students from the member educational institutions to participate in geospatial projects. The scholarships represented four of the educational institutions in the IndianaView consortium.

Each of the students provided a fact sheet about their project and a testimonial on how the scholarship assisted them. Examples of activities that the students completed include: designing K-12 instructional materials to integrate geospatial technologies in discovery and learning; studying the mycorrhizal drivers of non-native pest richness in U.S. forests; spatial analysis and habitat usage study of snapping turtles within an urban wetland; mapping archaeological excavations at Fort Ouiatenon using a self-developed geospatial mobile app; mapping local climate zone for Indianapolis using GIS-based methods and variables including building morphology and impervious surface; and study the evidence of alteration of sediments from past habitable environments in Gale crater, Mars using the Mastcam Imager.



A screenshot of Mapp – an Android based application created by an IndianaView student scholar, which allows archaeologists to map excavation sites and store images and notes.

Scholarship Testimonial: The scholarship rejuvenated my passion for this project. I was already excited to conduct this research, but the alleviation of my financial concerns made me even more eager. Earning the scholarship demonstrated that I can be successful as a woman in a male-dominated field (software development in archeology research).



Indiana Statewide LiDAR data portal main interface.

Tree canopy map for Delaware County, IN

IndianaView mini-grant program

IndianaView provided a means for partner institution to participate in IndianaView via geospatial projects relative to the state of Indiana. Two mini-grants were funded during 2020. One mini-grant project was the development of Indiana Statewide LiDAR data portal. The portal provides access to both 2011-2013 and 2016-2019 Indiana Statewide LiDAR and aerial imageries, which is available at: https://lidar.jinha.org. The project also developed additional geospatial data products such as DSM (Digital Surface Model) and NDHM (Normalized Digital Height Model) from the LiDAR for downloading. In addition, this portal visualized DTM (Digital Terrain Model) and NDHM layers, which allows information users to see these layers without downloading the LiDAR data.

Another project is to develop tree canopy mapping for Delaware county, IN, using LiDAR and color-infrared air photos. The product is the first high-resolution, countywide tree canopy map, which will be useful for prioritizing tree plantings and for tracking changes over time. The data is publicly available for urban forestry management and other applications.

IndianaView 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 G18AP00077.

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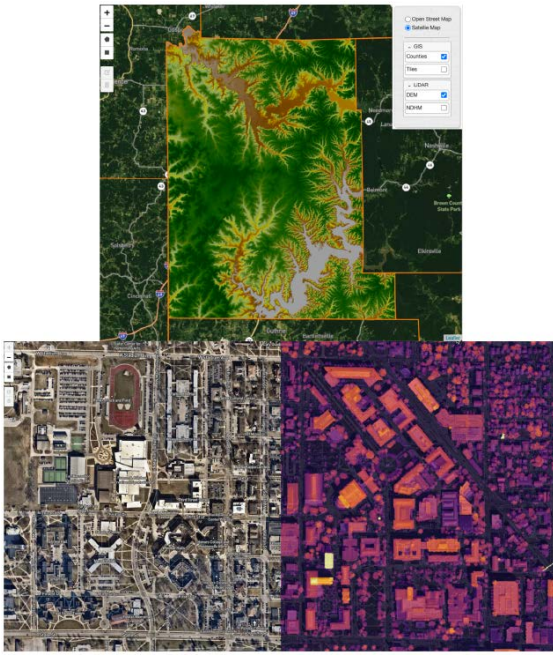
Benefits to Indiana

- The student scholarship program has greatly encouraged students across Indiana educational institutions to apply geospatial information in their specific research area, including K-12 education, forestry, biology, archeology, geography, and planetary science.
- The mini-grant program allows researchers in IndianaView consortium to generate additional geospatial data products and tools for the state of Indiana. The results derived from both of the projects have been shared publicly and presented at Indiana GIS virtual Conference.
- Supported by IndianaView, the Indiana Statewide LiDAR data portal (https://lidar.jinha.org) provides a convenient way to share the state LiDAR data and derivative products to public.
- One of the student scholarship projects has developed a course module for GER^{2}I (Gifted Education Research & Resource Institute) at Purdue, which teaches the GIS principles and data collection methods to K-12 students.
- IndianaView has been working with faculty members across disciplines at Purdue University to generate a proposal for Graduate Certificate program in GIS, which is under approval process. The education program will encourage students in different disciplines to learn geospatial information, including agriculture, engineering, science, archeology, technology, pharmacy and beyond.



The Indiana LiDAR data portal project provides a public accessible visualization platform for several geospatial data products derived from the Indiana Statewide LiDAR data (top: DTM, bottom left: Aerial Imagery, bottom-right: NDHM).

IndianaView Consortium Membership

Ball State University; Indiana State University; IUPUI Indiana University Purdue University Indianapolis; Vincennes University; Indiana University; Indiana University South Bend; Purdue University; Purdue University Fort Wayne; Purdue University Northwest; Martin University; University of Notre Dame; Valparaiso University; INSGC; Indiana Geographic Information Council; GENI; Indiana Geological Survey

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

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