WyomingView 2021 - 2022

WyomingView 2021 - 2022 Activities

11 UW Students Successfully Completed Internships

In GY 2021-22, one graduate and ten undergraduate students completed their internship (1 student completed 2 different projects). These students (future workforce) were trained on remote sensing projects for crop damage assessment (1 student), crop water stress (1), rangeland reclamation (1), wildfire mapping (1), invasive mapping (1), water mapping (2), and rapid flood mapping (5). These students used Landsat and Sentinel-2 A/B images for mapping and monitoring projects. Training students in problem-based remote sensing projects was the primary high-impact activity proposed by WyomingView for GY.

Four undergraduate interns presented their findings in the Wyoming Undergraduate Research Day (URD) in Laramie, WY (Apr 23). WyView PI trained these interns on image processing and presentation skills. Interns trained in water/flood mapping will be presenting their findings in an upcoming national conference.

WyomingView interns (from left to right) Shelby Stith, Traylin Bruegger, Jordan Jochems with WyomingView PI. Not pictured: Cody Green. These interns presented their findings in 2022 Wyoming Undergraduate Research Day, in Laramie, WY. Since 2004, WyomingView has trained 94 interns. Read testimonials from interns at: https://wyomingview.blogspot.com/p/interns.html

*More than 75 Wyoming high school students were introduced to tracking changes with satellite images and later assembled the large floor puzzle "Wyoming from Space". This activity was conducted as part of **Women in STEM** event in Laramie.*

Three EOD and 2 Outreach Activities

WyomingView reached out to 265+ school students (grade levels 8-12) in GY 2021-22.

- EOD activities were customized to match the content covered in the science classes
  - Fourth graders saw the association between rivers and human settlements, and growth over time (*15 students*)
  - Sheridan High School students were introduced to the images acquired in the visible and invisible regions of the spectrum and their utility for monitoring Earth surface features (*16 students*)
  - Laramie Middle School students (8th graders) used ALTA II Spectrometer for measuring spectral reflection of 2 sets of leaves, and later connected those measurements to satellite observations (*223 students*)
- Outreach activities to promote remote sensing science & applications to high school students in a) Science Fair Enrichment activities, and b) Women in STEM events.

EOD and outreach activities are effective to promote remote sensing applications and to recruit next generation of students.

WyomingView 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 Wyoming

- Past WyomingView interns are currently working in federal, state, and local government agencies & in private companies. Past interns have confirmed the value of the training they received as part of the internship
- New testimonials from past interns will be uploaded to: https://wyomingview.blogspot.com/p/then-now.html.
- WyomingView will continue to recruit and train more interns for future workforce development.

- WyomingView PI was invited by the Wyoming Farm Bureau Federation to its meetings to highlight the benefits of Landsat data for monitoring Wyoming crop and range lands.

- The first event was held in Cheyenne in March to coincide with their legislative outreach activities. The second event was held in Casper in November. More than 75 farmers and ranchers (in both events) were introduced to Landsat data and products, and how they can be used for mapping crop growth, crop stress, invasive species, and water availability in the state.

- Three farmers expressed interest in working with student interns for monitoring their fields and ranches.

WyomingView PI highlighted the benefits of 50 years of Landsat data in Wyoming Farm Bureau Federation's annual meeting Casper, Wyo.

WyomingView Consortium Membership

In the 2022 WyoGeo annual meeting, WyomingView PI talked about "Accessing Landsat Data and Products in the Collection Format Era". County and city planners from Wyoming were in attendance and learned the changes in data characteristics and distribution over the 50 years of the Landsat program (Sep 15, 2022 – Laramie).

WyomingView works with farmers and ranchers to promote remote sensing applications:

- In GY 2021-22, WyomingView worked with 4 farmers and ranchers for monitoring crop damage (MT), crop water stress (WY), invasive species mapping (WY), and rangeland reclamation (WY).
- Four WyomingView interns worked with these farmers and ranchers for processing Landsat and Sentinel-2 images.
- Three farmers provided testimony describing the benefits of Landsat imagery for monitoring ground conditions.

Testimonials provided by these farmers and ranchers are highly valued by AmericaView and USGS. WyomingView will continue to work with farmers and ranchers through the internship program.

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