



CALIFORNIAVIEW REMOTE SENSING ACTIVITIES 2015 - 2016



PROMOTING REMOTE SENSING RESOURCES

The CaliforniaView outreach activities were displayed at the annual University of California Davis (UCD) Open House (**Picnic Day**) in April 2016. More than 70,000 visitors attended the annual event. CalView offered a variety of hands-on activities, including a geospatial US capital matching game and a virtual tour of the UCD arboretum.



The UCD Marching Band as seen from the geospatial activity area during Picnic Day.



Visitors matching Landsat 8 image scenes of US capitals to a map.

CalView also offered a virtual walking tour through the campus arboretum. People were able to discover plant species and their respective growing zones by attaching magnet images of various plants to appropriate locations displayed on a map. The goal of this activity was to broaden the public's perception on the usefulness and applications of remote sensing in our daily lives.

Looking for a Needle in a Haystack
— A GIS Approach to Locate Plant Species

Plants are everywhere on our planet. The size on various forms, shapes and functions are distributed in various areas across the Earth. Plants are important indicators of climate change, as they convert carbon dioxide (an abundant greenhouse gas) into oxygen (a photosynthesis). They also provide us with a variety of resources, such as food, medicine, shelter, clothing, perfume and beautiful scenery. Plants are Earth's best friends!

The UC Davis Arboretum, which spans over 100 acres, is divided in Garden Collections, ranging from the Insect Collection to the East Asian Garden. Home to more than 2,400 species of plants, using GIS mapping tools (Geographic Information Systems), we have created an interactive map that allows the public to explore the Garden Collections and some specific plants that thrive there.

Here, we are using GIS to display plant locations in the arboretum and their spatial distributions based on data. GIS also allow scientists, faculty, and students to easily access information about:

- Average income
- Animal migration and nesting
- Crime probability
- Plant genetic backgrounds and relationships
- Images of a particular plant
- Scholarly articles and research papers about the particular plant

Using GIS, you can also determine data, such as:

GIS maps are user friendly and user dependent, so you can personalize your filtering and data that you want displayed. GIS technology makes updating maps a breeze!

Game Instructions

Read the Descriptors on: Determine plant categories based on: SI

PROVIDING REMOTE SENSING EDUCATION

Earth Observation Day activities were introduced into the Science and Society GIS undergraduate class at UC Davis. More than 35 students from various majors actively participated in this lecture (pictured below). The students were introduced to land cover change over time through an interactive remote sensing imagery online game.



As an example of the multi-disciplinary group of student, the picture on the left shows a statistics major student who is about to discover how some landscape features have changed over time throughout the world.

One of the two goals of this activity was to engage students in remote sensing as an exciting and powerful educational tool. The second goal was to enrich already existing classroom lectures with hands-on technology- based learning opportunities in the geospatial world.

CalView 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

<http://cstars.metro.ucdavis.edu/education-and-outreach/californiaview/>



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BENEFITS TO CALIFORNIA

California grows nearly half of the nation's fruit, nuts and vegetables, making it one of the nation's top agricultural states. Environmental disasters, however, such as annual wild fires and the ongoing water scarcity, threaten California's economy.

CalView's goal is to support California's economy by:

- Providing imagery and geospatial tools to the workforce for damage assessment and disaster preparedness.
- Relaying necessary information to stakeholders to support better-informed decision making on pressing environmental issues such as drought and wildfires that effect landowners and managers, forestry personnel, health professionals, and others.
- Educating and exciting the general public and educators about the benefits and applications of remote sensing imagery.
- Training educators and students on the accessibility of free Landsat data.
- Providing lesson plans guiding teachers on the implementation of remote sensing into their classroom curricula.



Landsat mosaic of California created from a combination of Landsat 7 data acquired during the period of July 1999 to September 2002 and the National Elevation Dataset.

CALIFORNIAVIEW CONSORTIUM MEMBERSHIP

CalView is housed at the University of California Davis and is part of the Center for Spatial Technologies & Remote Sensing (CSTARS). Its mission is to promote the use of freely available Landsat datasets for public education and outreach.

During the past grant year, CalView expanded its consortium to include members of the California GIS Council Working Group, as well as local industry and government partners.



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

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