Earth Lab Reflectance

Japan's Geiyo Archipelagio
([Credit: NASA Image of the Day](#))

Quick Updates

- Join us for the final presentations of the Earth Data Science Corps on 8/5/22 at 10 AM -12 PM MDT. Presentations include: bird behavior in the Prairie Pothole region, effects of water shortages in the Upper Colorado River Basin, correlations between snowpack and reservoir levels in the South Platte River Basin, and using lidar to uncover hidden features on the Pine Ridge Reservation. Register [here](#) for this event and read more about the EDSC below.

- <u>Note from the editor:</u> This will be the final Reflectance newsletter edited by myself (Elizabeth Woolner, Earth Lab's program assistant). I am going back to school at CU for a Masters in Environmental Studies and am passing the job of editing the newsletters to my colleague, Katherine Halama. Thanks for a great 2+ years!

ESIIL

The Environmental Data Science Innovation & Inclusion Lab

"New NSF Center will advance, broaden and catalyze environmental data science" - NSF

Earth Lab is thrilled to announce that we have applied for and received a major award from the National Science Foundation to create ESIIL - The Environmental Data Science Innovation and Inclusion Lab. Led by CU Boulder and in collaboration with the University of Oslo and NSF's Cyverse at the University of Arizona, ESIIL is a next-generation NSF synthesis center. Funding for the five-year program begins August 1st, 2022.

ESIIL will enable a global community of environmental data scientists to leverage the wealth of environmental data and emerging analytics to develop science-based solutions to solve pressing challenges in biology and other environmental sciences. Additionally, ESIIL holds inclusion as a core principle and method for diversifying environmental data science at a time when society needs all perspectives, and science needs to serve all. The Center's vision is that cultivating a diverse and inclusive community of practice is needed to produce innovative breakthroughs in environmental data science.

ESIIL's research community will generate

"ESIIL Aims to Foster a "Revolution" in Environmental Data Science" - CIRES

discoveries and novel approaches through: 1) cutting-edge team science, 2) innovative tools and collaborative cyberinfrastructure, 3) data science education and training, and 4) building inclusive participation and diverse groups. These activities advance the frontier of environmental data science, a rapidly evolving discipline bridging the computational, biological, environmental, and social sciences.

"CyVerse Is Foundational Partner in New NSF Center to Turn Environmental Data Science into Actionable Knowledge" - Cyverse

To read more about the specific activities ESIIL has planned and ways you can engage with ESIIL, please visit our website at esiil.org.

Also, please consider attending our virtual celebration event on August 1st, 2022 at 2:30 - 3:00 MDT.

Virtual Celebration Registration Link:
https://bit.ly/3cturxp

Jennifer Balch is the Director of ESIIL. Her research explores global patterns of anthropogenic climate and land cover disruption as well as changes to fire regimes.

The Earth Data Science Corps: Year 3

The Earth Data Science Corps (or EDSC), funded by the National Science Foundation, is a $1.2 million three-year project that builds capacity to teach and learn earth data science at schools serving communities that are historically underrepresented in STEM. The project includes a combination of online data skills training for students and faculty, career focused webinars, and project-based learning. EDSC participants come from United Tribes Technical College, Oglala Lakota College, Metropolitan State University of Denver, and CU Boulder.

In addition to hosting students, the EDSC team plans to analyze pre-program and post-program data to assess learning outcomes and contribute to the larger body of knowledge in this area. Interim Education Director Nate Quarderer presented preliminary findings from this work during Earth Lab's EDS Seminar series. Watch Here.

From the Students: What is your favorite part of the EDSC?

"My favorite part of EDSC has been learning how to work with data in Python, especially spatial data. It has really opened my eyes to all of the possibilities we have to use this type of data ... and how [it] can give you a much more in-depth understanding of anything you might be studying, and even just the world you live in. I've also really enjoyed the environment EDSC has created, and the relationships between students that it facilitates. It really makes you feel like you're part of a team."
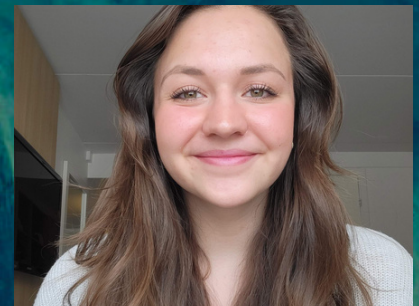
Sofia V. (CU Boulder)

"My favorite part of EDSC so far has been the ability to meet and collaborate with students from different walks of life. I am a sociology major so it has been interesting to collaborate with students that come from other academic backgrounds like environmental science and geography. I also identify as Native Hawaiian, so it's exciting and enriching to work with students from other indigenous communities."

Lola J.H. (MSU Denver)

Although the EDSC project will be wrapping up this year, the team has plans to continue working with undergrads and faculty from underserved groups. Via the ESIIL STARS program, the lessons learned from hosting the EDSC will be expanded to a wider audience.

Learn more about the EDSC and ESIIL's Education Initiatives at earthlab.colorado.edu/edsc and esiil.org.