

The Environmental Data Science Innovation & Inclusion Lab (ESIIL): a next-generation NSF data synthesis center

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What is ESIIL?



The Environmental Data Science Innovation & Inclusion Lab (ESIIL) is a NSF-funded data synthesis center led by the University of Colorado Boulder in collaboration with NSF's CyVerse at the University of Arizona and the University of Oslo.

ESIIL enables a global community of environmental data scientists to leverage the wealth of environmental data and emerging analytics to develop science-based solutions to solve challenges in biology and other environmental sciences.

ESIIL holds inclusion as a core principle and method for diversifying science at a time when society needs all perspectives, and science needs to serve all.



Engagement Opportunities

Events

- **Annual Hackathons** will catalyze large-team collaborations and cross-sector partnerships
- **Annual Innovation Summits** will explore Grand Challenges in environmental data science (EDS), with themes like continental-scale ecology, AI for the Earth, and environmental justice and equity
- **Incubator working groups** will form the foundation of innovation with researchers and other institutions

CONNECT WITH ESIIL

Sign up to join the listserv

Email ESIIL

esiil@colorado.edu

Programs

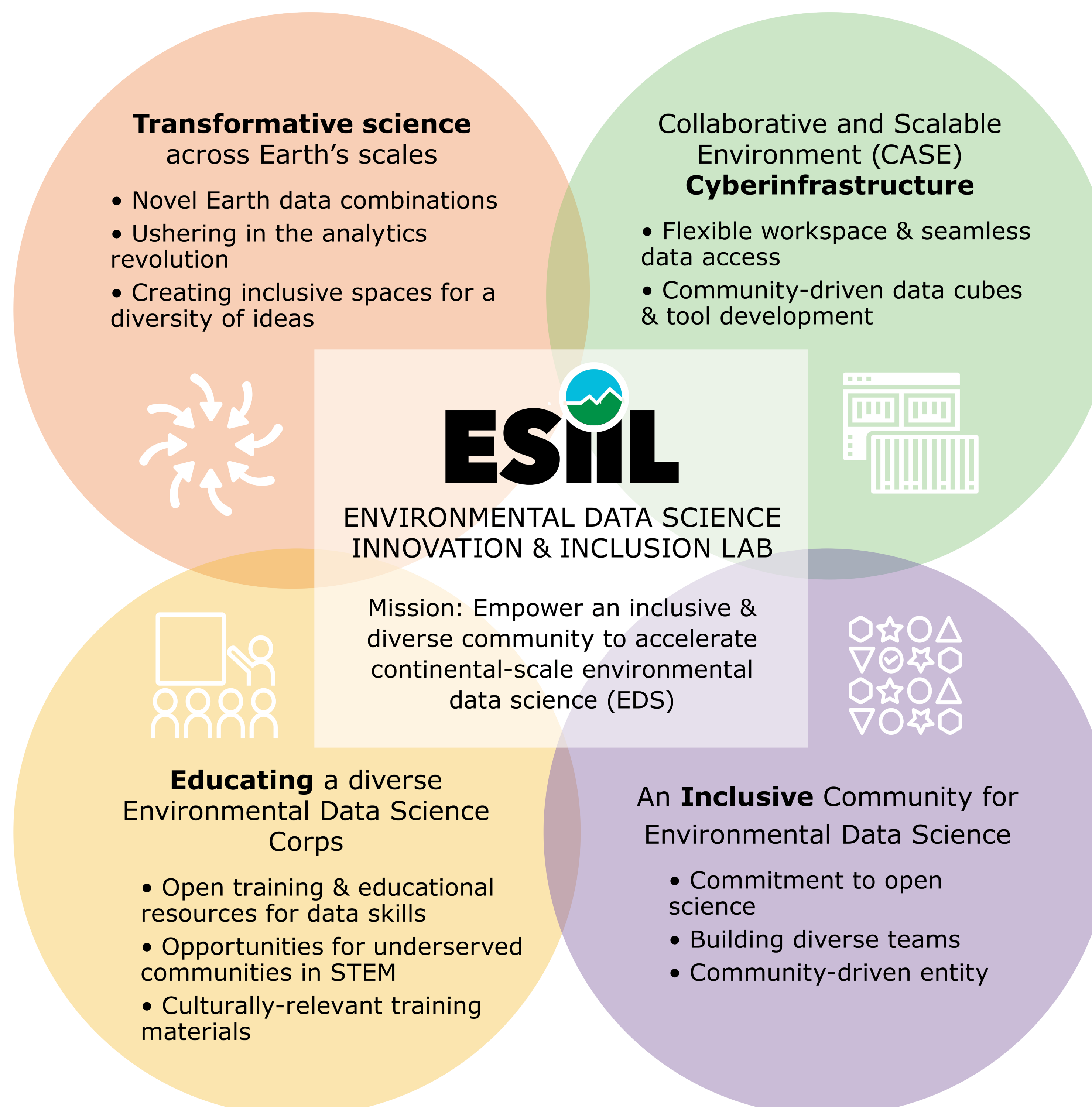
- ESIIL will support **postdoctoral cohorts** to drive scientific inquiry
- **ESIIL Stars internships** will support individuals from underrepresented groups as they gain EDS experience
- **ESIIL Leaders** will engage emerging scientists from diverse communities to foster leadership skills

Partnerships

- ESIIL will work closely with:**
- Data partners (e.g., NEON, LTER)
 - Applications partners
 - Advocates for underrepresented groups
 - Data science educators
 - Environmental, biological, data science, and AI/ML communities

NSF's Newest Data Synthesis Center

ESIIL's mission is to empower an inclusive and diverse community to accelerate environmental data science



What Does ESIIL Do?



SCIENCE

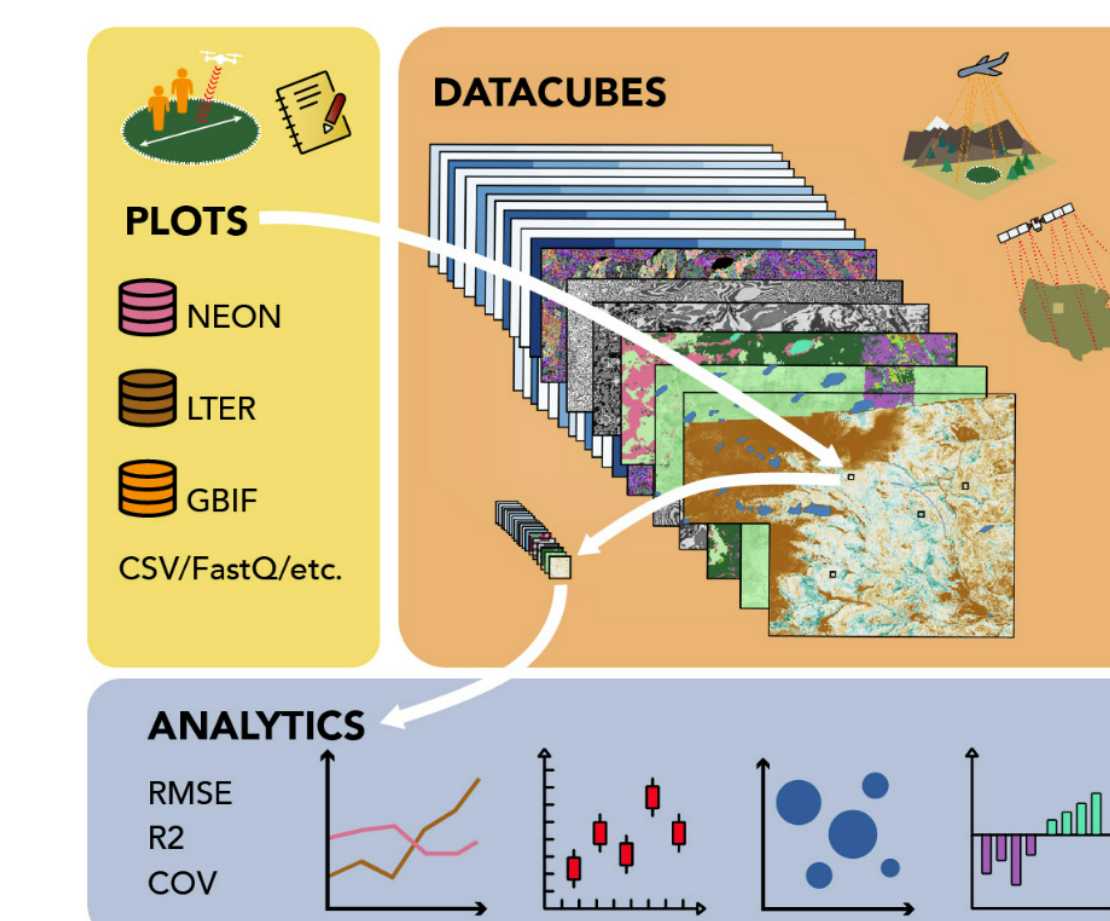
Advance environmental data science through team science

- Bridging the divide between data science and environmental science
- Dedicated team science research agenda and best practices
- Catalyzing use-inspired research via cross-sector partnerships

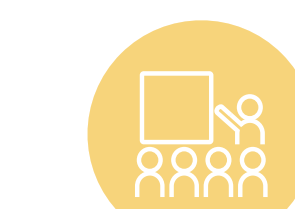


CYBER-INFRASTRUCTURE

Accelerate discovery & lower barriers with analytics & cyberinfrastructure



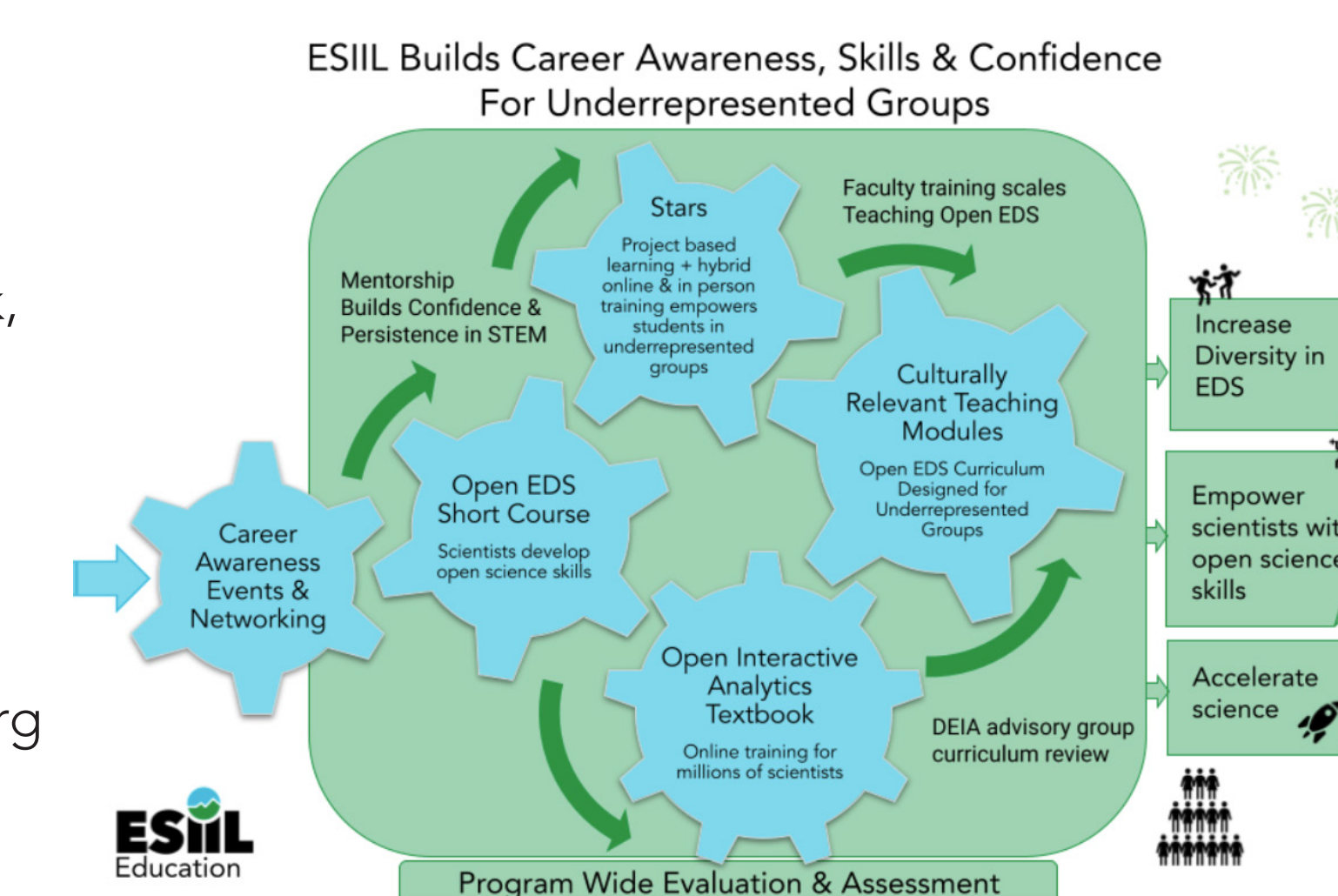
- Use of AI along with open, diverse data for new discoveries
- Collaborative and Scalable Environment (CASE) cyberinfrastructure lowers barriers to scientific collaboration
- Open and easily deployed tools, datasets, and reproducible workflows



EDUCATION

Facilitate access & empower users with data science education & training

- 2,000 planned users in the ESIIL Network, a community of practice
- Culturally relevant curricula scaled to a global audience on EarthDataScience.org



DIVERSITY

Promote diversity in ideas & collaborations by building inclusive participation

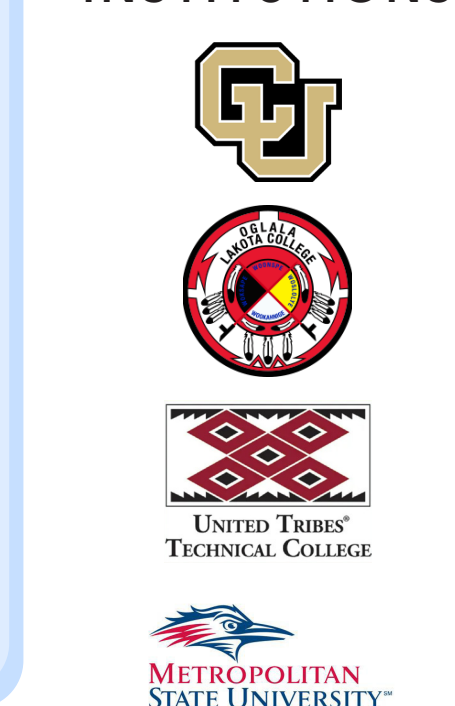


Building capacity to teach and learn technical data skills for diverse student populations

STARS is for undergraduate students who are...

- New to data science
- Interested in earth & environmental science
- Attending one of our partner institutions

PARTNER INSTITUTIONS



- ESIIL STARS and Leaders programs reach students and scientists from underrepresented communities
- Collaborations include industry, government, and non-profit partners

