



LEAP

WINTER 2024 : MOMENTUM BOOTCAMP ON CLIMATE DATA SCIENCE

[Call for Applications](#)

Date: January 10-11, 2024

Schedule: 9am–5pm (EDT), both days

Venue: Smith Learning Theater at Teachers College, Columbia University

[The Center for Learning the Earth with Artificial Intelligence and Physics \(LEAP\)](#) at Columbia University is excited to announce its Winter 2024 Momentum Bootcamp on Climate Data Science. This two-day immersive, hands-on workshop is designed by LEAP researchers as part of LEAP’s education programming to foster convergence of climate science and data science, vertically integrate research and education, and forge a LEAP research and learning community including K-12 teachers, LEAP doctoral students, postdocs, faculty, and other stakeholders.

The 2024 Winter Bootcamp aims to teach Climate Data Science in the cloud using python tools with an emphasis on reproducibility and collaboration. Participants will learn through a variety of activities including lectures, labs, and team hacking, which will prepare participants for machine learning-enabled climate research and more advanced and intensive research-oriented workshops.

Applications are welcome from:

- Faculty members and research scientists from LEAP institutions (Columbia, NYU, University of Minnesota, and University of California at Irvine)
- Postdocs and PhD students
- Research scientists
- NYC Department of Education teachers
- American Museum of Natural History partners
- The general public



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Pre-requisites:

- Basic knowledge of scientific computing with Python: numpy, matplotlib, pandas
- Access to [LEAP-Pangeo Hub](#) (participants will be granted access upon acceptance)

Bootcamp participants will:

- Discover, access, and explore open-access climate datasets, including satellite observations and climate simulations, using the Xarray python package.
- Calculate common climate statistics and diagnostics of variability and change using Xarray.
- Perform interactive visualization of climate data using the HoloViews package.
- Perform machine learning on spatio-temporal climate data.
- Compare machine learning models' performance and prediction skill.
- Perform open science in the cloud using the LEAP-Pangeo Jupyter Hub.
- *Be required to bring their own laptop / charger.*

APPLICATION DEADLINE:

Thursday, December 21, 2023 at 11:59 pm (EDT).

- *Applicants will be contacted by December 27, 2023 to complete registration and secure their spot.*
- *The registration fee (\$400) will cover participant meals and operational costs.*
- *You may be eligible for partial or full financial aid (e.g., LEAP researcher/students, NYC DoE teacher, non-profit partner). Please respond to the last question on the [application form](#) for consideration.*

Please [contact LEAP](#) with any questions.

**Seats are limited, so [apply today!](#)
The deadline for applications is December 21, 2023.**