

NCAR Earth System Data Science (ESDS) Resources Guide

Purpose of this document: Description of ESDS initiatives and how to get involved.

About ESDS

The [Earth System Data Science initiative](#) aims to profoundly increase the effectiveness of the NCAR/UCAR workforce by promoting deeper collaboration centered on analytics, improving our capacity to deliver impactful, actionable, reproducible science and serve the university community by transforming how geoscientists synthesize and extract information from large, diverse data sets.

Events

ESDS Forum

Every other Monday from 2-3pm MT, we hold the ESDS Forum in person and over Google Meet, which provides a venue for discussion, coordination and showcasing work in progress. Examples include:

- Workflow demos
- Overview of packages and analysis tools
- Focused discussions on new efforts
- Feedback on computing and analysis resources

This is a great place to discuss progress on your project, and get feedback from the community!

If you are interested in giving a talk or leading a discussion, sign up using [this spreadsheet](#). See the [Meeting Notes](#) for an overview of previous discussions.

Office Hours

Have a question about Python/data analysis issues? Set up an [“office hours” appointment!](#)
Interested in volunteering for office hours? Check out [this blog post](#).

Several ESDS members are prepared to answer your Python questions via 1-on-1 appointments. You can now select the ESDS member with the specialization best equipped for your question, find a time that works for you, and generate an appointment. Please also provide how you'd like to meet (in-person or virtual) and a brief description of your question.

If your question is about an error message you are raising in your workflow, help us help you by being ready to provide a copy of your dataset and code so we can reproduce your error. Depending on your question, we may be able to walk you through a solution or send you documentation/resources that address your question. See the [Office Hour Notes](#) for a summary of previous sessions.

Analysis Workflow Special Interest Group (AWSIG)

The AWSIG provides a communication forum for the exchange of ideas and experiences related to the operational aspects of CISL supported analysis resources and services (e.g. Casper, JupyterHub, GLADE, VirtualGL, etc.). This working group complements the more modeling/simulation focused [NCAR HPC User Group \(NHUG\)](#).

The AWSIG will hold ~bi-monthly meetings during the ESDS Forum. The CISL consulting group (CSG) will coordinate meetings with assistance as needed from the ESDS leadership. Meetings will consist of free format discussions, and informational presentations from CISL technical staff and NCAR/UCAR scientific staff.

The AWSIG is open to all users of NCAR's HPC resources. Representatives from CISL's Consulting Group and relevant resource providers will be in attendance. We desire that representatives from each scientific lab attend as well.

If you'd like to propose a discussion topic, or upvote a suggested topic, please use [this spreadsheet](#). You can find more details on [AWSIG goals and organization here](#).

Python Training

The NCAR Python Tutorial Series is a biweekly tutorial series, detailing various aspects of the Python ecosystem. Be sure to check out these tutorials!

If you would like to join the LearnPython Google group to be informed of updates and events in the seminar series, please do so by following [this link](#) and clicking "Join Group" next to the group name.

Communication

Email List

If you would like to join the ESDS Email List (Google Group) to be informed of updates about ESDS activities, please do so by following [this link](#) and clicking "Join Group" next to the group name.

GitHub Repository

The [ESDS GitHub repository](#) is a space where we can post progress on this initiative, publish blog posts related to various workflows, and document “best practices,” in addition to serving as a resource/discussion spot via comments on pages and posts.

Zulip

[Zulip](#) is a Slack-alternative that we use for asynchronous conversations on many topics, including Python questions. Channels include “ESDS”, “dask”, “python-questions”, “python-dev”, “jupyterlab-hub” and more. Join the NCAR-UCAR Zulip [here](#) (link does not expire).

Resources

Project Pythia

Want to learn more about using Python, GitHub, or Jupyter Notebooks for Earth system data science? Project Pythia is a home for Python-centered learning resources that are open-source, community-owned, geoscience-focused, and high-quality. Check out Project Pythia tutorials, examples, and other training materials [here](#).

ESDS Websites

<https://ncar.github.io/esds/>

- FAQ: <https://ncar.github.io/esds/faq/>
- Blog: <https://ncar.github.io/esds/blog/>
- Communication: <https://ncar.github.io/esds/communication/>
- Calendar: <https://ncar.github.io/esds/calendar/>