

Are we ready for AI in Climate Research?

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AI and Trustworthiness in Climate

- Focus on science – observations, models, peer review, ...
- Focus on systems – openness, reproducibility, workflows, ...

AI amplifies whatever conditions we create around data and workflows.

- Open access to high value curated data with provenance and context
- Reproducible and reusable open science workflows
- Composable integration platforms to enable multimodal AI-integrated science

Focusing on AI Readiness

To be ready for AI is to be ready to continuously innovate its foundational platforms.

National Data Platform

.... enabling interoperable data and AI integrated workflows.

The screenshot shows the National Data Platform website. At the top, there is a navigation bar with 'Catalog', 'About', 'Events and Press', and 'User Stories'. A 'Get Started with NDP' button and a 'Log in/Register' button are also present. The main heading is 'Open Data, Available Access and AI Services'. Below this, a sub-heading reads 'Building the nation's federated data ecosystem. Explore data. Run analyses. Transform AI education.' A button labeled 'Explore our catalog of datasets' is visible. To the right is a map of the United States composed of a grid of blue and grey squares. Below the map are logos for 'SAN DIEGO SUPERCOMPUTER CENTER', 'EarthScope Consortium', 'UC San Diego', 'THE UNIVERSITY OF UTAH', and 'University of Colorado Boulder'. At the bottom, three statistics are displayed: '4656 data collections and livestreams', '5 data and AI services', and '606 registered users'.

A **broad, federated** and **extensible** data ecosystem to promote collaboration, innovation and customizable use of data on top of existing national infrastructure capabilities.

<https://www.nationaldatapatform.org/>



Translating Research into Impact



<https://scil.ucsd.edu/wifire-program>



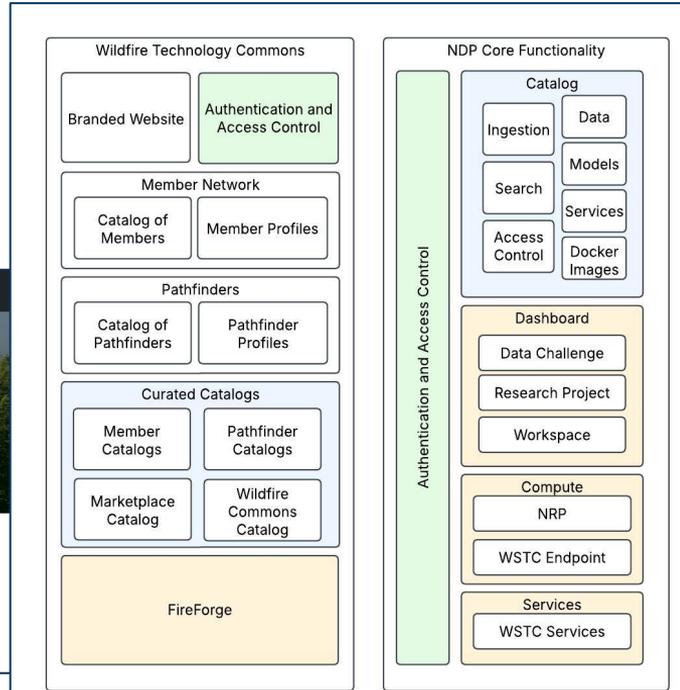
Actionable Fire Science
through Democratizing Access to Computing and AI

Wildfire Science and Technology Commons

Contact: Claire Stirm, UC San Diego (PI: Altintas)



<https://www.wildfirecommons.org/>



- **NDP Catalog** is extended with catalogs for members, marketplace and pathfinders to serve a large network of wildfire experts
- FireForge platform is built on top of an **NDP** using **core NDP services**
 - Authentication, Catalogs, Project Spaces, Workspaces
- A customized look-n-feel expanding NDP endpoint backend with a specialized user experience
- Platform launched July 1st, 2025

Thank you!

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