Xarray is an open source Python library providing high-level, easy-to-use data structures and analysis tools for working with complex, multidimensional labeled datasets and arrays in Python.

Xarray interoperates with many of the core libraries in the scientific Python ecosystem making it a powerful high-level tool for data analysis.

USE CASES

Scientists at the US National Center for Atmospheric Research use Xarray for analysis and visualization of climate data.

Astronomers at Princeton University use Xarray to analyze galactic dynamics in magnetohydrodynamical simulations.

Data scientists around the world use Xarray via the ArviZ package for exploratory analysis of Bayesian machine learning models.

PLANNED FEATURES

+ Release a new plugin-based system to allow users to implement their own "backends" to support custom I/O formats and operations.

+ Develop a more flexible plugin system for indexes, allowing third parties to implement custom way to query Xarray datasets.

+ Revamp Xarray's documentation, starting with new tutorials aimed at teaching Xarray using examples from specific domains.
**PROJECT NEEDS**

<table>
<thead>
<tr>
<th>Task</th>
<th>Hours</th>
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</thead>
<tbody>
<tr>
<td>Bridge the gap between Xarray and &quot;tensor&quot; ML libraries</td>
<td>400 hrs</td>
</tr>
<tr>
<td>Publicly document workflows and best practices using Xarray in quantitative finance</td>
<td>200 hrs</td>
</tr>
<tr>
<td>Daily issue triage and CI management.</td>
<td>261 hrs</td>
</tr>
</tbody>
</table>

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For more information on xarray, including our governance structure and project roadmap, please visit [http://xarray.pydata.org/](http://xarray.pydata.org/)

For more information: info@numfocus.org | +1 (512) 831-2870.