Below are some great resources that you can use to learn more about the functions and they way they are being used.

## 1. Python and Core Libraries

#### **General Python**

- Python Docs Official Python reference.
- <u>W3Schools Python Tutorial</u> Beginner-friendly tutorials.
- Real Python In-depth tutorials with examples.

# 2. NumPy - Numerical computing (arrays, statistics, etc.)

- Official Docs
- Read about: np.nan, np.mean(), np.quantile(), np.isnan(), array slicing, and logical indexing.
- Tutorial: NumPy Quickstart

## 3. Pandas – Working with tabular data (like Excel/CSV)

- Official Docs
- Key Concepts:
  - o read\_csv, dropna, fillna, astype, groupby, plot, and .loc, .iloc
  - DataFrame: Like a table (rows + columns)
  - Series: A single column
- Cheatsheet: Pandas Cheatsheet by DataCamp

#### 4. Matplotlib - Basic plotting (line, bar, scatter)

- Official Docs
- Read about: plt.plot(), plt.hist(), plt.title(), plt.show()
- Tutorial: Matplotlib Pyplot Tutorial

## 5. Seaborn – Advanced statistical plots (histograms, boxplots, heatmaps)

- Official Docs
- Tutorial: <u>Seaborn Tutorial</u> (<u>DataCamp</u>)
- Key Functions:
  - o sns.histplot, sns.boxplot, sns.scatterplot
  - Works well with pandas DataFrames

## 6. Xarray – Multidimensional labeled arrays (for NetCDF, satellite, weather data)

- Official Docs
- Read about: open\_dataset, isel, sel, where, .plot(), and .values
- Quickstart: Xarray Quickstart

#### 7. Extra Help for Students

#### For Jupyter Notebook Users

Use ? or help() in code:

import pandas as pd help(pd.read\_csv)