Python for Data Analysis, 3rd edition

Data Wrangling with pandas, NumPy, and Jupyter

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January 4, 2022

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Chapter 1

NumPy Basics: Arrays and Vectorized Computation

NumPy, short for Numerical Python, is one of the most important foundational packages for numerical computing in Python.

Here are some of the things you’ll find in NumPy:

- ndarray, an efficient multidimensional array providing fast array-oriented arithmetic operations and flexible broadcasting capabilities
- Mathematical functions for fast operations on entire arrays of data without having to write loops
- Tools for reading/writing array data to disk and working with memory-mapped files
- Linear algebra, random number generation, and Fourier transform capabilities
- A C API for connecting NumPy with libraries written in C, C++, or FORTRAN