CODE BASICS

Numpy

TAKEAWAYS

Introduction & Benefits

1 numpy (numeric Python) is a popular library used for data analysis, machine learning and scientific computing.

2 Any person doing data analysis or machine learning in Python, uses numpy almost on a daily basis.

3 Numpy arrays offers several benefits over plain Python list such as,
   - Less memory consumption
   - Fast operations
   - Convenient APIs for variety of mathematical functions

Basic Operations

1   You do not have to remember API syntax. In real life, people always refer to numpy documentation, ChatGPT or Google to know the syntax.

2   sum(), min(), max(), std() are used for doing quick statistical analysis.

3   ndim, itemsize, size, shape are the functions used for figuring out an array's dimensions, element byte size, total number of elements, and the size of each dimension, respectively.

Slicing, Stacking, Splitting

1 Numpy supports index and slicing operators similar to Python native list.

2 np.hstack and np.vstack are used to stack two numpy arrays horizontally and vertically.

3 np.hsplit and np.vsplit are used to split a numpy array either horizontally or vertically.