



NumPy

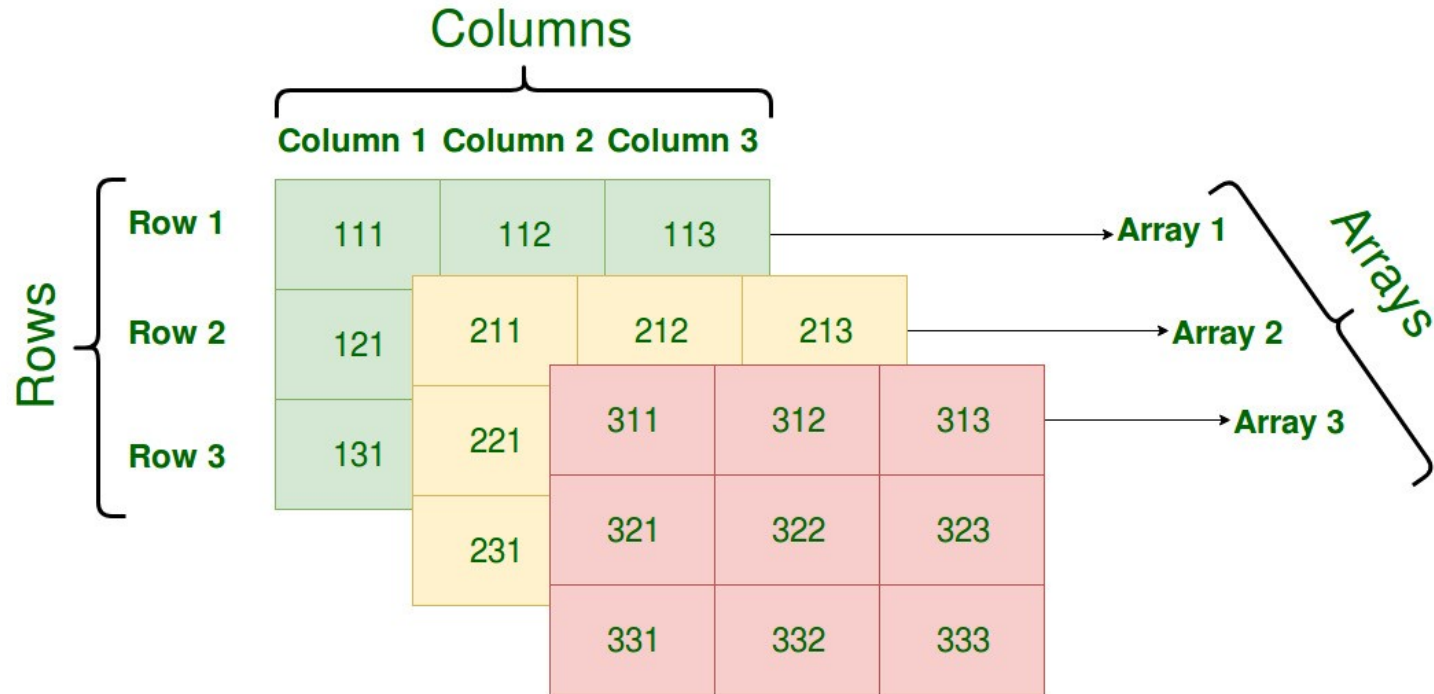
- What is NumPy

- NumPy is a Python library used for working with arrays. It also has functions for working in domain of linear algebra, fourier transform, and matrices.

Why NumPy?

- It's fast
- Is the core library for scientific computing in Python.
- Backbone of other Python scientific packages
- It provides a high-performance multidimensional array object, and tools for working with these arrays

Multidimensional Array



What are we going to cover?

- Most useful functions in numpy
- Numpy datatypes & attributes
- Creating numpy
- Viewing arrays and matrices
- Manipulating and comparing arrays

What are we going to cover?

- Sorting arrays
- Use cases

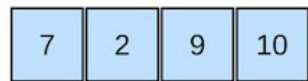
How can you get help?

- Follow along with the code
- Try is yourself
- Search for it
- Try again
- Dont forget to ask

Let's Code!!

Anatomy of a numpy array

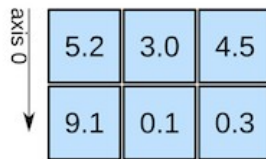
1D array



axis 0 →

shape: (4,)

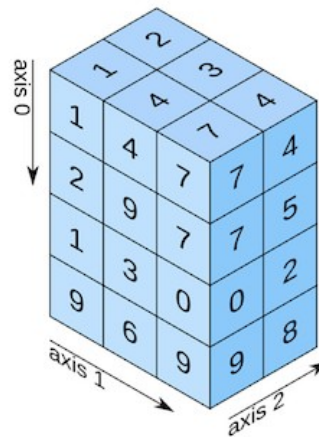
2D array



axis 0 ↓

axis 1 →

shape: (2, 3)



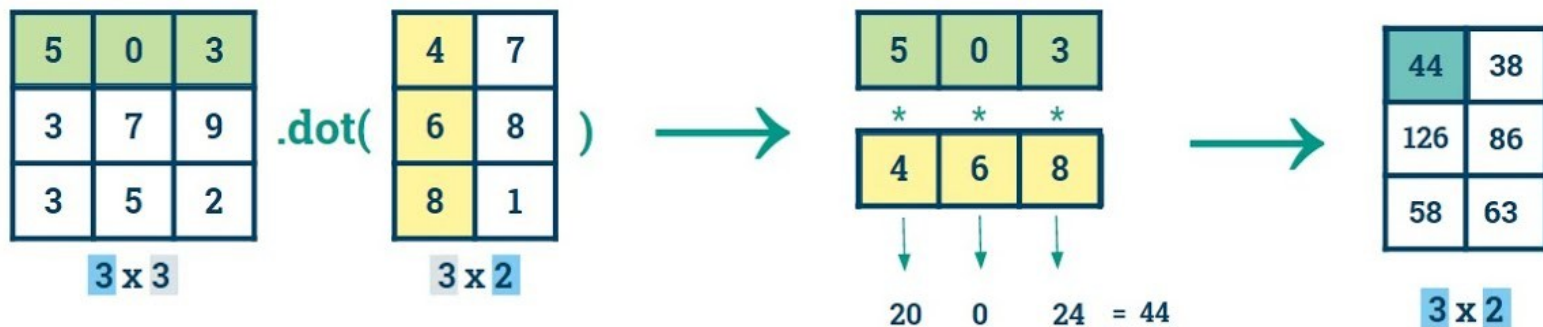
axis 0 ↓

axis 1 →

axis 2 ↗

shape: (4, 3, 2)

Dot Product in NumPy



Check out live demo@ www.matrixmultiplication.xyz