Day 74- 90 days of Analytics: Numpy Basics

In today's video, we looked at the basics of Numpy with python

The following were mentioned

-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. NumPy stands for Numerical Python.

-NumPy aims to provide an array object that is up to 50x faster than traditional Python lists. The array object in NumPy is called **ndarray**, it provides a lot of supporting functions that make working with **ndarray** very easy.

-We install numpy using the following command: `pip install numpy`

-Once NumPy is installed, we import it in our applications by using the import keyword: `import numpy`

-NumPy is usually imported under the **np** alias.

-In Python alias are an alternate name for referring to the same thing.

-We create an alias with the as keyword while importing: `import numpy as np`

-Example

```
import numpy as np
arr = np.array([1, 2, 3, 4, 5])
print(arr)
```

NumPy is used to work with arrays. The array object in NumPy is called **ndarray**. We can create a NumPy **ndarray** object by using the array() function.

-To create an ndarray, we can pass a list, tuple or any array-like object into the array() method, and it will be converted into an ndarray

-NumPy arrays have an attribute called shape that returns a tuple with each index having the number of corresponding elements.

-The NumPy array object has a property called dtype that returns the data type of the array

-1D array indexing is the same as accessing an array element. We can access an array element by referring to its index number. The indexes in NumPy arrays start with 0, meaning that the first element has index 0, and the second has index 1, ….

-To access elements from 2-D arrays we can use comma separated integers representing the dimension and the index of the element.

-To make a copy of an array, we use the copy() method of the array object.

Link to the YouTube Recording: https://www.youtube.com/watch?v=nNNLUZAQ5jc

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