# What makes Numpy shape() different from Numpy size()?

## NumPy shape() is about used to get structural shape of our 2D array’

For example :-import NumPy as np

Np.zeroes

## NumPy size() gives us how many elements present in total.

For example:-import NumPy as np

Np.random.randint.

## I noticed that NumPy operations take an argument called shape such as

## Np.zeroes,whereas some others take an argument called size,seems a bit

## Off since it really specifies the shape of the output.

## Shape relates to the size of dimensions of N dimensional array.

## Size relates to amount of elements that are contained in the array.

## A is (3,9)

## A[1]

# Is Numpy describing the idea of broadcasting?

## The term broadcasting describes how NumPy treats arrays with different

## shapes during arithmetic operations. The smaller array is broadcast

## across the larger array

## example import NumPy as np

a=np.array([1,3,5,7,9])

b=np.array([2,4,6,8,0])

a\*b

Array ([2,12,30,56,0])

# What makes python better than other libraries for numerical

# Computation?

## Python is extremely popular for numerical calculations due to the following reasons

## \*the accessible and flexible nature of language itself

## \*huge range of high quality scientific libraries are now available

## \*the fact that libraries and languages are open source

## \*the recent surge of interest in using python in machine learning and artificial intelligence.

# How does NumPy deals with files?

## NumPy arrays are efficient data structures for working in data with python so it is common to need to save NumPy arrays to file.

## Example :-

#save NumPy array as csv file

From NumPy import as array

From NumPy import as save txt

#define data

Data=as array([0,1,2,3,4,5])

#save to csv file

Save txt (‘data csv’, data, delimiter=’ ,’)

# Mention the importance of NumPy. empty?

## The NumPy module of python provides a function called NumPy. empty().

## This function is used to create an array without entries of given shape and type.

Example:-

Import NumPy as np

A=np. empty([3,2])

A.

## 