Numpy basics

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***Summaries Numpy Arrays***

1. What are numpy array and how are they different than lists

* It is an array with one data type. We can do operations on array, such as times and division.

1. How to make numpy arrays—you can use several examples here

* Import numpy as np first
* np.array([1,2,3]) #one-dim
* np.array([1,2,3],[4,5,6]) #two-dim
* np.zeros(dimension) such as np.zeros((3,4))
* np.arrange(0,10,3) #(start,end+1,step)
* np.linspace, np.full, np.random.rand, np.random.randint

1. How to index and slice numpy arrays

* array[index1,(index2…indexn)]
* array[0:2,8:9], array[:,0]
* array[array<5]

1. Key methods associated with numpy arrays

* array.sort(), array.flatten(), array.reshape(), array.resize(), array.sum(), array.min(), array.mean(axis=0), array.max(), array.corrcoef()

1. Key attributes associated with numpy arrays

* size, shape, dtype, tolist, info

***Summaries important numpy functions that you have used***

* np.append()
* np.insert()
* np.concatenate((array1, array2), axis=0)
* np.substract()
* np.power()
* np.sin()
* np.sqrt()
* np.ceil()
* np.floor()
* np.round()
* np.mean(array, axis=0)
* np.std(array, axis=0)
* np.std(array, axis=0)
* np.array\_equal(array1, array2)
* np.split(array, 4) #split an array into four sub arrays
* np.hsplit(array, 2) #split an array horizontally on the 2nd index