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Convert python list with None values to numpy array with nan values

I am trying to convert a list that contains numeric values and None values to numpy.array , such that None is replaces with numpy.nan .

For example:

```
my_list = [3,5,6,None,6,None]

# My desired result:
my_array = numpy.array([3,5,6,np.nan,6,np.nan])
```

Naive approach fails:


```
>>> my_list
[3, 5, 6, None, 6, None]
>>> np.array(my_list)
array([3, 5, 6, None, 6, None], dtype=object) # very limited
>>> _ * 2
Traceback (most recent call last):
  File "<stdin>", line 1, in <module>
TypeError: unsupported operand type(s) for *: 'NoneType' and 'int'

>>> my_array # normal array can handle these operations
array([ 3.,  5.,  6., nan,  6., nan])
>>> my_array * 2
array([ 6., 10., 12., nan, 12., nan])
```

What is the best way to solve this problem?

python numpy

asked Oct 18 '13 at 18:03


 Akavall28.9k19102136

2 Answers

You simply have to explicitly declare the data type:

```
>>> my_list = [3, 5, 6, None, 6, None]
>>> np.array(my_list, dtype=np.float)
array([ 3.,  5.,  6., nan,  6., nan])
```

answered Oct 18 '13 at 18:10

 Jaime42.3k660116

I had a feeling that I was missing something simple...Thank You – Akavall Oct 18 '13 at 18:12

The problem with this approach is that it only works for float for which nan is defined and not for dtype int. – Andrzej Pronobis May 20 '15 at 2:14


Please see my question stackoverflow.com/questions/30339214/... on that problem exactly. – Andrzej Pronobis May 20 '15 at 2:35

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What about

```
my_array = np.array(map(lambda x: numpy.nan if x==None else x, my_list))
```

answered Oct 18 '13 at 18:07

 [Udo Klein](#)

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