

np.dot()

DANGER

Numpy

- np.dot doesnt broadcast
- Wont generate error messages
- *, np.matmul(), @ broadcast

pytorch

- torch.mm(), torch.bmm(), torch.dot() dont broadcast
- Will generate error messages warning if dims dont match
- @, torch.matmul() broadcast

np.dot() does not broadcast
np.dot(a,b) != a@b

```
# np.dot() doesn't broadcast
# * and @ are not the same for more than 2 dims because of
# broadcasting. np.dot() doesn't broadcast but @ does.
# np.dot considered legacy.
```

```
a = np.random.rand(3,4,2)
b = np.random.rand(2,4)
d = np.dot(a,b)
e = a@b
print('-----')
print(d==e)
-----
```

```
[[[ True  True  True  True]
 [ True  True  True  False]
 [ True  True  True  True]
 [ True  False  True  True]]]
```

```
[[ True  True  True  True]
 [False  True  True  False]
 [ True  True  True  True]
 [False  False  True  True]]]
```

```
[[ True  True  True  True]
 [False  True  True  False]
 [ True  True  True  True]
 [ True  True  True  True]]]
```

The result should be all True!! If broadcast was working!