

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() doesnt broadcast  
# * and @ are not the same for more than 2 dims because of  
broadcasting. np.dot() doesnt 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!