```python
"""
To transpose the 2d arrays inside a 3d array

"""

import numpy as np

a = np.array([[1, 2, 3],
              [4, 5, 6],
              [7, 8, 9]])

# append numpy array
b = np.append(a,a.T).reshape(-1,a.shape[0], a.shape[1])

print(f'\nBefore transpose:\n{b}')

print(f'\nDirect transpose:\n{b.T}')

# transpose:
c = np.moveaxis(b.T, -1, 0)
c_ravel = c.ravel().astype(np.int)

print(f'\nAfter transpose and move axis:\n{c}')

np.savetxt("c_ravel.txt", c_ravel)

d = np.loadtxt("c_ravel.txt").astype(int).reshape(-1,a.shape[0], a.shape[1])
print(f'\nAfter save and reload: \n{d}')
```

```
Before transpose:
[[[1 2 3]
  [4 5 6]
  [7 8 9]]

 [[1 4 7]
  [2 5 8]
  [3 6 9]]]

Direct transpose:
[[[1 1]
  [4 2]
  [7 3]]

 [[2 4]
  [5 5]
  [8 6]]

 [[3 7]
  [6 8]
  [9 9]]]
```

```
After transpose and move axis:
[[[1 4 7]
  [2 5 8]
  [3 6 9]]

 [[1 2 3]
  [4 5 6]
  [7 8 9]]]

After save and reload:
[[[1 4 7]
  [2 5 8]
  [3 6 9]]

 [[1 2 3]
  [4 5 6]
  [7 8 9]]]
```