[1]:
```
import numpy as np
import torch
from torch.utils.data import Dataset, DataLoader
import glob
import matplotlib.pyplot as plt
from sklearn.metrics import confusion_matrix, accuracy_score
import cv2
```

[16]:
```
tumor=[]
healthy=[]
for f in glob.iglob("/home/brian/桌面/人工智慧作業/腦瘤/brain_tumor_dataset/yes/*.jpg"):
    img = cv2.imread(f)
    img = cv2.resize(img,(128,128))
    b, g, r = cv2.split(img)
    img = cv2.merge([r,g,b])
    tumor.append(img)
for f in glob.iglob("/home/brian/桌面/人工智慧作業/腦瘤/brain_tumor_dataset/no/*.jpg"):
    img = cv2.imread(f)
    img = cv2.resize(img,(128,128))
    b, g, r = cv2.split(img)
    img = cv2.merge([r,g,b])
    healthy.append(img)
healthy = np.array(healthy)
tumor = np.array(tumor)
All = np.concatenate((healthy, tumor))
```

[17]:
```
healthy = np.array(healthy)
tumor = np.array(tumor)
All = np.concatenate((healthy, tumor))
```

[18]:
```
healthy.shape
tumor.shape
```

[18]:
```
(86, 128, 128, 3)
```

[19]:
```
np.random.choice(10,5,replace=False)
```

[19]:
```
array([3, 8, 4, 1, 7])
```

[26]:
```
def plot_random(healthy, tumor, num=5):
    healthy_imgs = healthy[np.random.choice(healthy.shape[0],num,replace=False)]
    tumor_imgs = tumor[np.random.choice(tumor.shape[0], num, replace = False)]
    plt.figure(figsize=(16,9))
    for i in range(num):
        plt.subplot(1,num,i+1)
        plt.title("healthy")
        plt.imshow(healthy_imgs[i])
    plt.figure(figsize=(16,9))
    for i in range(num):
        plt.subplot(1,num,i+1)
        plt.title("tumor")
        plt.imshow(tumor_imgs[i])
```

[27]:
```
plot_random(healthy, tumor, num = 4)
```