20231114_HW8

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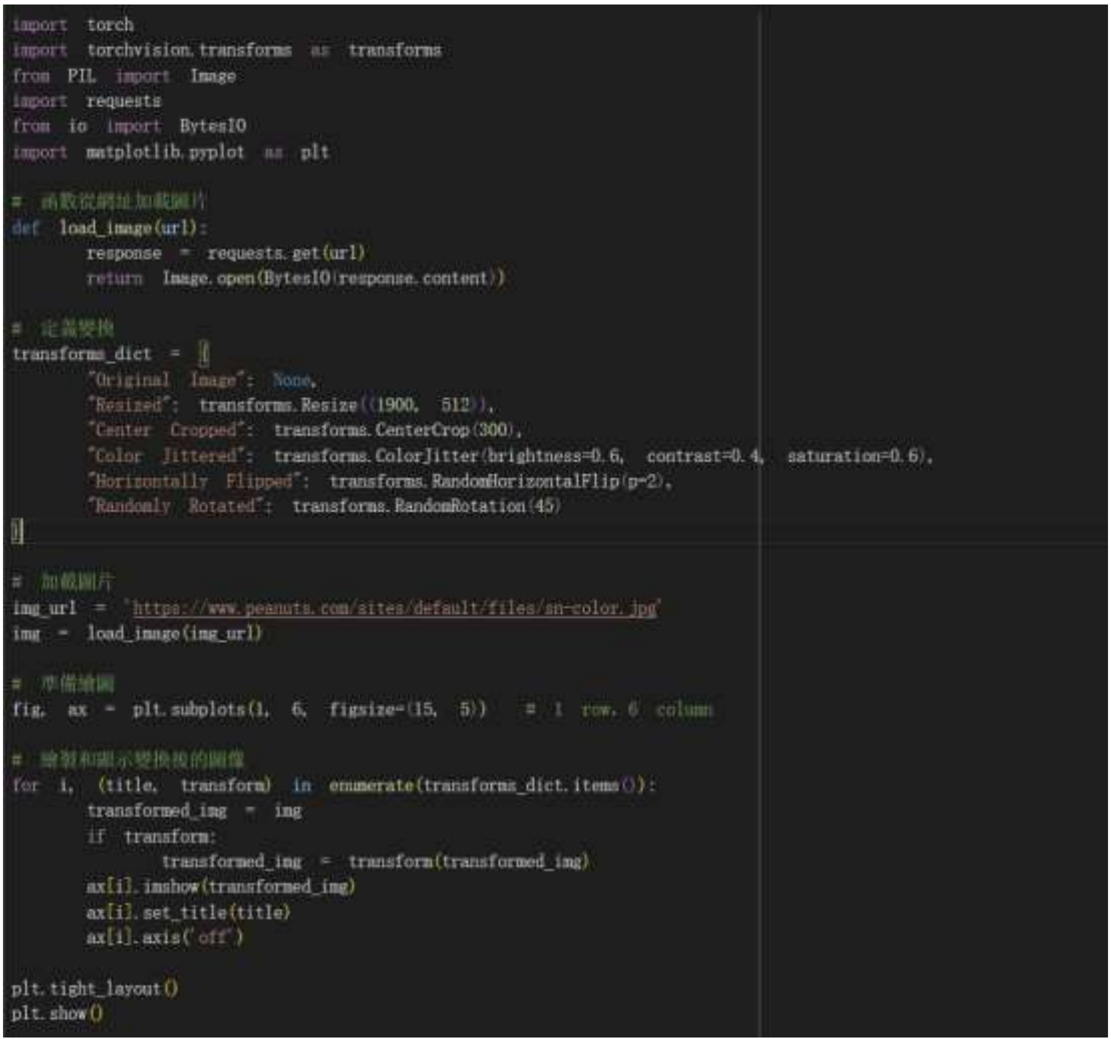
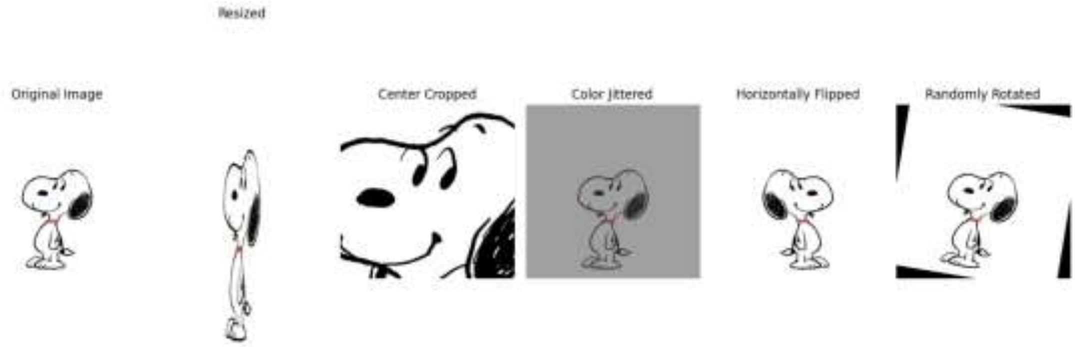
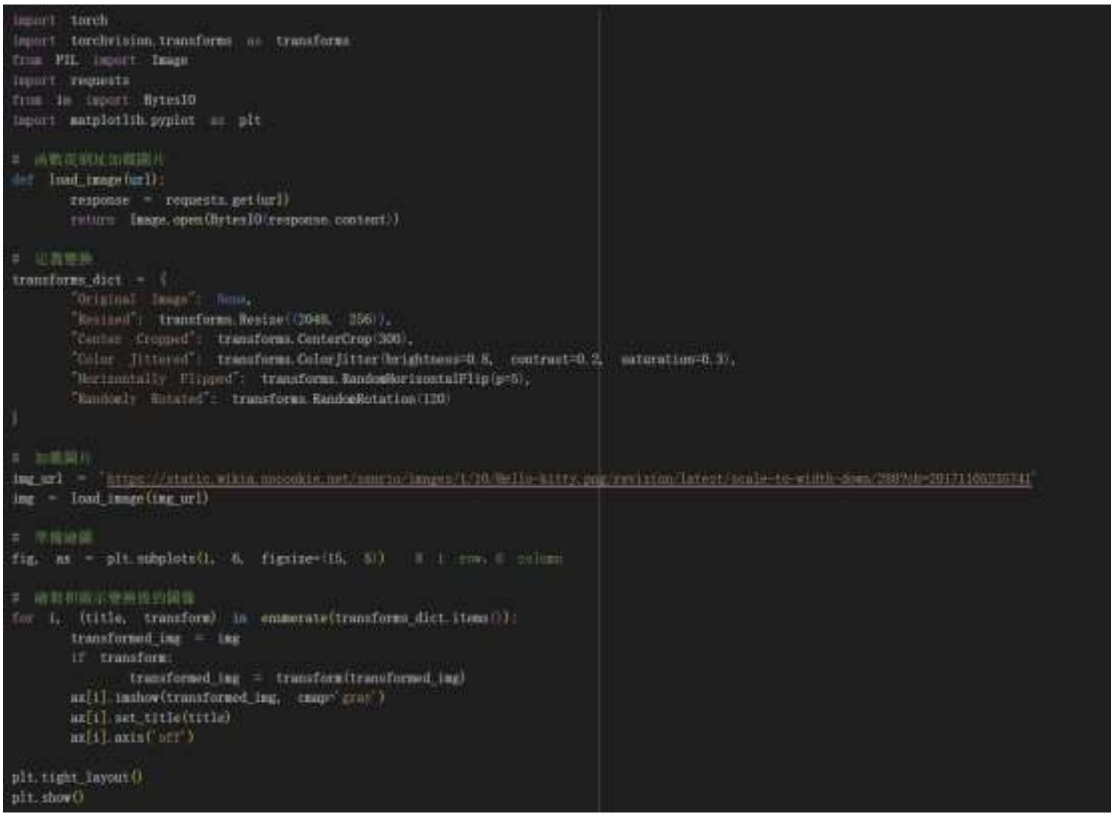
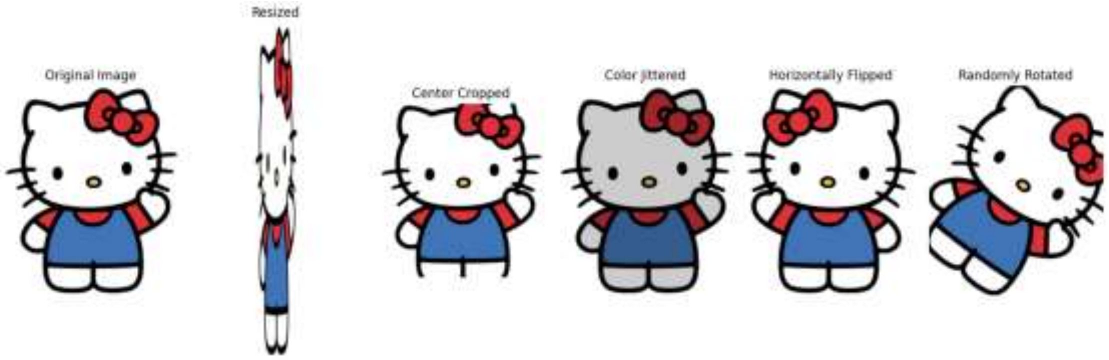


```
import torch
import torchvision.transforms as transforms
from PIL import Image
import requests
from io import BytesIO
import matplotlib.pyplot as plt

# 函數從網址加載圖片
def load_image(url):
        response = requests.get(url)
        return Image.open(BytesIO(response.content))

# 定義變換
transforms_dict = {
        "Original Image": None,
        "Resized": transforms.Resize((1900, 512)),
        "Center Cropped": transforms.CenterCrop(300),
        "Color Jittered": transforms.ColorJitter(brightness=0.6, contrast=0.4, saturation=0.6),
        "Horizontally Flipped": transforms.RandomHorizontalFlip(p=2),
        "Randomly Rotated": transforms.RandomRotation(45)
}

# 加載圖片
img_url = 'https://www.peanuts.com/sites/default/files/sn-color.jpg'
img = load_image(img_url)

# 準備繪圖
fig, ax = plt.subplots(1, 6, figsize=(15, 5))  # 1 row, 6 column

# 繪製和顯示變換後的圖像
for i, (title, transform) in enumerate(transforms_dict.items()):
        transformed_img = img
        if transform:
                transformed_img = transform(transformed_img)
        ax[i].imshow(transformed_img)
        ax[i].set_title(title)
        ax[i].axis('off')

plt.tight_layout()
plt.show()
```





```
import torch
import torchvision.transforms as transforms
from PIL import Image
import requests
from io import BytesIO
import matplotlib.pyplot as plt

# 函數從網址加載圖片
def load_image(url):
        response = requests.get(url)
        return Image.open(BytesIO(response.content))

# 定義變換
transforms_dict = {
        "Original Image": None,
        "Resized": transforms.Resize((2048, 256)),
        "Center Cropped": transforms.CenterCrop(300),
        "Color Jittered": transforms.ColorJitter(brightness=0.8, contrast=0.2, saturation=0.3),
        "Horizontally Flipped": transforms.RandomHorizontalFlip(p=5),
        "Randomly Rotated": transforms.RandomRotation(120)
}

# 加載圖片
img_url = 'https://static.wikia.nocookie.net/sanrio/images/1/10/Hello-kitty.png/revision/latest/scale-to-width-down/288?cb=20171105235741'
img = load_image(img_url)

# 準備繪圖
fig, ax = plt.subplots(1, 6, figsize=(15, 5))  # 1 row, 6 column

# 應用和顯示變換後的圖像
for i, (title, transform) in enumerate(transforms_dict.items()):
        transformed_img = img
        if transform:
                transformed_img = transform(transformed_img)
        ax[i].imshow(transformed_img, cmap='gray')
        ax[i].set_title(title)
        ax[i].axis('off')

plt.tight_layout()
plt.show()
```


Original Image
Resized
Center Cropped
Color Jittered
Horizontally Flipped
Randomly Rotated