

04_image_resize

June 10, 2024

1 Dataset Image Resizer

- Upscales or downscales images in the dataset to a specified size
- In our case, we resized the images to **128 x 128**

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[1]: import os
from PIL import Image

IMG_SIZE = 128

def resize_image(image_path, new_dimensions=(IMG_SIZE, IMG_SIZE)):
    with Image.open(image_path) as img:
        resized_img = img.resize(new_dimensions)
        return resized_img

def resize_images_in_directory(input_directory, output_directory,
    ↪new_dimensions=(IMG_SIZE, IMG_SIZE)):
    os.makedirs(output_directory, exist_ok=True)
    for filename in os.listdir(input_directory):
        if filename.endswith(".png") or filename.endswith(".jpg"):
            image_path = os.path.join(input_directory, filename)
            output_path = os.path.join(output_directory, filename)
            resized_img = resize_image(image_path, new_dimensions)
            resized_img.save(output_path)

resize_images_in_directory('../data/test/000_airplane', f'../data/
    ↪test_resized_{IMG_SIZE}/000_airplane')
resize_images_in_directory('../data/test/001_automobile', f'../data/
    ↪test_resized_{IMG_SIZE}/001_automobile')
resize_images_in_directory('../data/test/002_bird', f'../data/
    ↪test_resized_{IMG_SIZE}/002_bird')
resize_images_in_directory('../data/test/003_cat', f'../data/
    ↪test_resized_{IMG_SIZE}/003_cat')
resize_images_in_directory('../data/test/004_deer', f'../data/
    ↪test_resized_{IMG_SIZE}/004_deer')
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resize_images_in_directory('../data/test/005_dog', f'../data/
↳test_resized_{IMG_SIZE}/005_dog')
resize_images_in_directory('../data/test/006_frog', f'../data/
↳test_resized_{IMG_SIZE}/006_frog')
resize_images_in_directory('../data/test/007_horse', f'../data/
↳test_resized_{IMG_SIZE}/007_horse')
resize_images_in_directory('../data/test/008_ship', f'../data/
↳test_resized_{IMG_SIZE}/008_ship')
resize_images_in_directory('../data/test/009_truck', f'../data/
↳test_resized_{IMG_SIZE}/009_truck')
resize_images_in_directory('../data/train1/000_airplane', f'../data/
↳train1_resized_{IMG_SIZE}/000_airplane')
resize_images_in_directory('../data/train1/001_automobile', f'../data/
↳train1_resized_{IMG_SIZE}/001_automobile')
resize_images_in_directory('../data/train1/002_bird', f'../data/
↳train1_resized_{IMG_SIZE}/002_bird')
resize_images_in_directory('../data/train1/003_cat', f'../data/
↳train1_resized_{IMG_SIZE}/003_cat')
resize_images_in_directory('../data/train1/004_deer', f'../data/
↳train1_resized_{IMG_SIZE}/004_deer')
resize_images_in_directory('../data/train1/005_dog', f'../data/
↳train1_resized_{IMG_SIZE}/005_dog')
resize_images_in_directory('../data/train1/006_frog', f'../data/
↳train1_resized_{IMG_SIZE}/006_frog')
resize_images_in_directory('../data/train1/007_horse', f'../data/
↳train1_resized_{IMG_SIZE}/007_horse')
resize_images_in_directory('../data/train1/008_ship', f'../data/
↳train1_resized_{IMG_SIZE}/008_ship')
resize_images_in_directory('../data/train1/009_truck', f'../data/
↳train1_resized_{IMG_SIZE}/009_truck')
resize_images_in_directory('../data/train2/000_airplane', f'../data/
↳train2_resized_{IMG_SIZE}/000_airplane')
resize_images_in_directory('../data/train2/001_automobile', f'../data/
↳train2_resized_{IMG_SIZE}/001_automobile')
resize_images_in_directory('../data/train2/002_bird', f'../data/
↳train2_resized_{IMG_SIZE}/002_bird')
resize_images_in_directory('../data/train2/003_cat', f'../data/
↳train2_resized_{IMG_SIZE}/003_cat')
resize_images_in_directory('../data/train2/004_deer', f'../data/
↳train2_resized_{IMG_SIZE}/004_deer')
resize_images_in_directory('../data/train2/005_dog', f'../data/
↳train2_resized_{IMG_SIZE}/005_dog')
resize_images_in_directory('../data/train2/006_frog', f'../data/
↳train2_resized_{IMG_SIZE}/006_frog')

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resize_images_in_directory('../data/train2/007_horse', f'../data/
↳train2_resized_{IMG_SIZE}/007_horse')
resize_images_in_directory('../data/train2/008_ship', f'../data/
↳train2_resized_{IMG_SIZE}/008_ship')
resize_images_in_directory('../data/train2/009_truck', f'../data/
↳train2_resized_{IMG_SIZE}/009_truck')
resize_images_in_directory('../data/train3/000_airplane', f'../data/
↳train3_resized_{IMG_SIZE}/000_airplane')
resize_images_in_directory('../data/train3/001_automobile', f'../data/
↳train3_resized_{IMG_SIZE}/001_automobile')
resize_images_in_directory('../data/train3/002_bird', f'../data/
↳train3_resized_{IMG_SIZE}/002_bird')
resize_images_in_directory('../data/train3/003_cat', f'../data/
↳train3_resized_{IMG_SIZE}/003_cat')
resize_images_in_directory('../data/train3/004_deer', f'../data/
↳train3_resized_{IMG_SIZE}/004_deer')
resize_images_in_directory('../data/train3/005_dog', f'../data/
↳train3_resized_{IMG_SIZE}/005_dog')
resize_images_in_directory('../data/train3/006_frog', f'../data/
↳train3_resized_{IMG_SIZE}/006_frog')
resize_images_in_directory('../data/train3/007_horse', f'../data/
↳train3_resized_{IMG_SIZE}/007_horse')
resize_images_in_directory('../data/train3/008_ship', f'../data/
↳train3_resized_{IMG_SIZE}/008_ship')
resize_images_in_directory('../data/train3/009_truck', f'../data/
↳train3_resized_{IMG_SIZE}/009_truck')
resize_images_in_directory('../data/train4/000_airplane', f'../data/
↳train4_resized_{IMG_SIZE}/000_airplane')
resize_images_in_directory('../data/train4/001_automobile', f'../data/
↳train4_resized_{IMG_SIZE}/001_automobile')
resize_images_in_directory('../data/train4/002_bird', f'../data/
↳train4_resized_{IMG_SIZE}/002_bird')
resize_images_in_directory('../data/train4/003_cat', f'../data/
↳train4_resized_{IMG_SIZE}/003_cat')
resize_images_in_directory('../data/train4/004_deer', f'../data/
↳train4_resized_{IMG_SIZE}/004_deer')
resize_images_in_directory('../data/train4/005_dog', f'../data/
↳train4_resized_{IMG_SIZE}/005_dog')
resize_images_in_directory('../data/train4/006_frog', f'../data/
↳train4_resized_{IMG_SIZE}/006_frog')
resize_images_in_directory('../data/train4/007_horse', f'../data/
↳train4_resized_{IMG_SIZE}/007_horse')
resize_images_in_directory('../data/train4/008_ship', f'../data/
↳train4_resized_{IMG_SIZE}/008_ship')

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resize_images_in_directory('../data/train4/009_truck', f'../data/  
↳train4_resized_{IMG_SIZE}/009_truck')  
resize_images_in_directory('../data/train5/000_airplane', f'../data/  
↳train5_resized_{IMG_SIZE}/000_airplane')  
resize_images_in_directory('../data/train5/001_automobile', f'../data/  
↳train5_resized_{IMG_SIZE}/001_automobile')  
resize_images_in_directory('../data/train5/002_bird', f'../data/  
↳train5_resized_{IMG_SIZE}/002_bird')  
resize_images_in_directory('../data/train5/003_cat', f'../data/  
↳train5_resized_{IMG_SIZE}/003_cat')  
resize_images_in_directory('../data/train5/004_deer', f'../data/  
↳train5_resized_{IMG_SIZE}/004_deer')  
resize_images_in_directory('../data/train5/005_dog', f'../data/  
↳train5_resized_{IMG_SIZE}/005_dog')  
resize_images_in_directory('../data/train5/006_frog', f'../data/  
↳train5_resized_{IMG_SIZE}/006_frog')  
resize_images_in_directory('../data/train5/007_horse', f'../data/  
↳train5_resized_{IMG_SIZE}/007_horse')  
resize_images_in_directory('../data/train5/008_ship', f'../data/  
↳train5_resized_{IMG_SIZE}/008_ship')  
resize_images_in_directory('../data/train5/009_truck', f'../data/  
↳train5_resized_{IMG_SIZE}/009_truck')
```