

Homework-2 report.

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Google Collab URL:

<https://colab.research.google.com/drive/1UwvL3YYoY4S3c0PPOf3SeAYtGr9wrM2b?usp=sharing#scrollTo=gFStMW3MHTnL>

Images Result:

1. Cup



2. Frypan

Original Image



Transformed Image



```
original image shape: (3024, 4032)
transformed image shape: torch.Size([3, 224, 224])


image name is :Frypan2
Resnet50 :
Classification ID: 567
Classification Name: frying pan
Confidence Score: 0.9346346855163574

image name is :Frypan2
Resnet101:
Classification ID: 567
Classification Name: frying pan
Confidence Score: 0.9120055437088013

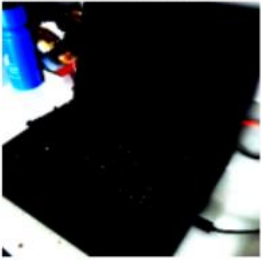
image name is :Frypan2
wide_resnet101_2 :
Classification ID: 567
Classification Name: frying pan
Confidence Score: 0.8371719121932983
```

3. Laptop

Original Image



Transformed Image



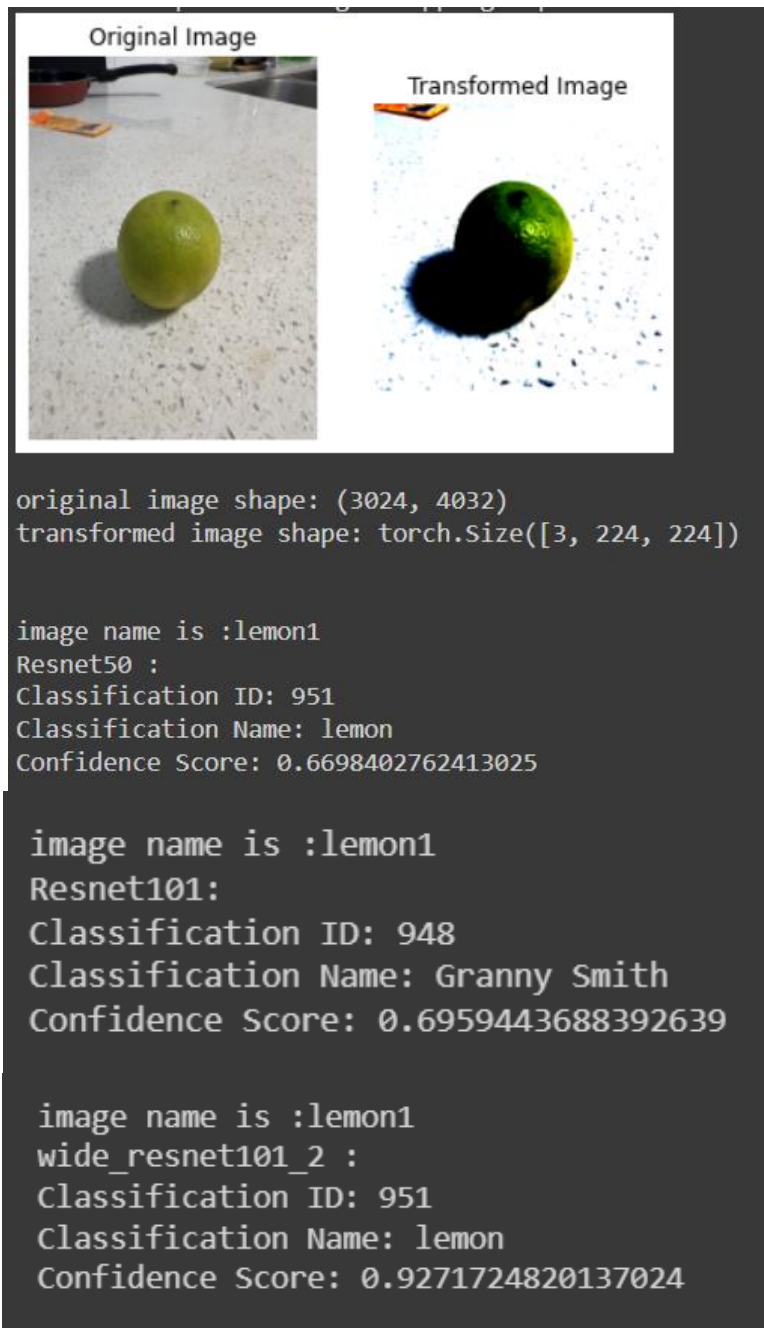
```
original image shape: (4032, 3024)
transformed image shape: torch.Size([3, 224, 224])

image name is :Laptop2
Resnet50 :
Classification ID: 620
Classification Name: laptop
Confidence Score: 0.711138129234314

image name is :Laptop2
Resnet101:
Classification ID: 620
Classification Name: laptop
Confidence Score: 0.5576639175415039

image name is :Laptop2
wide_resnet101_2 :
Classification ID: 681
Classification Name: notebook
Confidence Score: 0.587395966053009
```

4. Lemon



5. Orange

Original Image



Transformed Image



```
original image shape: (3024, 4032)
transformed image shape: torch.Size([3, 224, 224])

image name is :orange2
Resnet50 :
Classification ID: 951
Classification Name: lemon
Confidence Score: 0.6521332859992981

image name is :orange2
Resnet101:
Classification ID: 940
Classification Name: spaghetti squash
Confidence Score: 0.6393812894821167

image name is :orange2
wide_resnet101_2 :
Classification ID: 951
Classification Name: lemon
Confidence Score: 0.9923533797264099
```

6. Running Shoes :



```
original image shape: (3024, 4032)
transformed image shape: torch.Size([3, 224, 224])
```

```
image name is :runningshoes1
Resnet50 :
Classification ID: 770
Classification Name: running shoe
Confidence Score: 0.629805862903595
```

```
image name is :runningshoes1
Resnet101:
Classification ID: 770
Classification Name: running shoe
Confidence Score: 0.7891529202461243
```

```
image name is :runningshoes1
wide_resnet101_2 :
Classification ID: 770
Classification Name: running shoe
Confidence Score: 0.3972378373146057
```

7. Orange :



8. Milk Can :

Original Image



Transformed Image



original image shape: (3024, 4032)
transformed image shape: torch.Size([3, 224, 224])

image name is :milkcan1
Resnet50 :
Classification ID: 804
Classification Name: soap dispenser
Confidence Score: 0.924509584903717

image name is :milkcan1
Resnet101:
Classification ID: 804
Classification Name: soap dispenser
Confidence Score: 0.4500972330570221

image name is :milkcan1
wide_resnet101_2 :
Classification ID: 899
Classification Name: water jug
Confidence Score: 0.4942266047000885

9. Stove :

Original Image

A photograph of a stainless steel electric range with four burners and an oven below. The image is slightly tilted and has a warm, indoor lighting.

Transformed Image

The same stove image, but transformed into a smaller, square format with a dark background, likely for model input.

```
original image shape: (3024, 4032)
transformed image shape: torch.Size([3, 224, 224])


image name is :stove1
Resnet50 :
Classification ID: 827
Classification Name: stove
Confidence Score: 0.28680145740509033

image name is :stove1
Resnet101:
Classification ID: 651
Classification Name: microwave
Confidence Score: 0.47984862327575684


image name is :stove1
wide_resnet101_2 :
Classification ID: 651
Classification Name: microwave
Confidence Score: 0.6762447357177734
```

10. Laptop :

Original Image



Transformed Image



```
original image shape: (4032, 3024)
transformed image shape: torch.Size([3, 224, 224])

image name is :Laptop1
Resnet50 :
Classification ID: 681
Classification Name: notebook
Confidence Score: 0.4824792444705963

image name is :Laptop1
Resnet101:
Classification ID: 681
Classification Name: notebook
Confidence Score: 0.6595272421836853

image name is :Laptop1
wide_resnet101_2 :
Classification ID: 681
Classification Name: notebook
Confidence Score: 0.5232745409011841
```

11. Fry pan:

Original Image



Transformed Image



original image shape: (3024, 4032)
transformed image shape: torch.Size([3, 224, 224])

image name is :Frypan1
Resnet50 :
Classification ID: 567
Classification Name: frying pan
Confidence Score: 0.9650144577026367

image name is :Frypan1
Resnet101:
Classification ID: 567
Classification Name: frying pan
Confidence Score: 0.9776387810707092

image name is :Frypan1
wide_resnet101_2 :
Classification ID: 567
Classification Name: frying pan
Confidence Score: 0.9882988929748535

12. Cup :

Original Image

Transformed Image

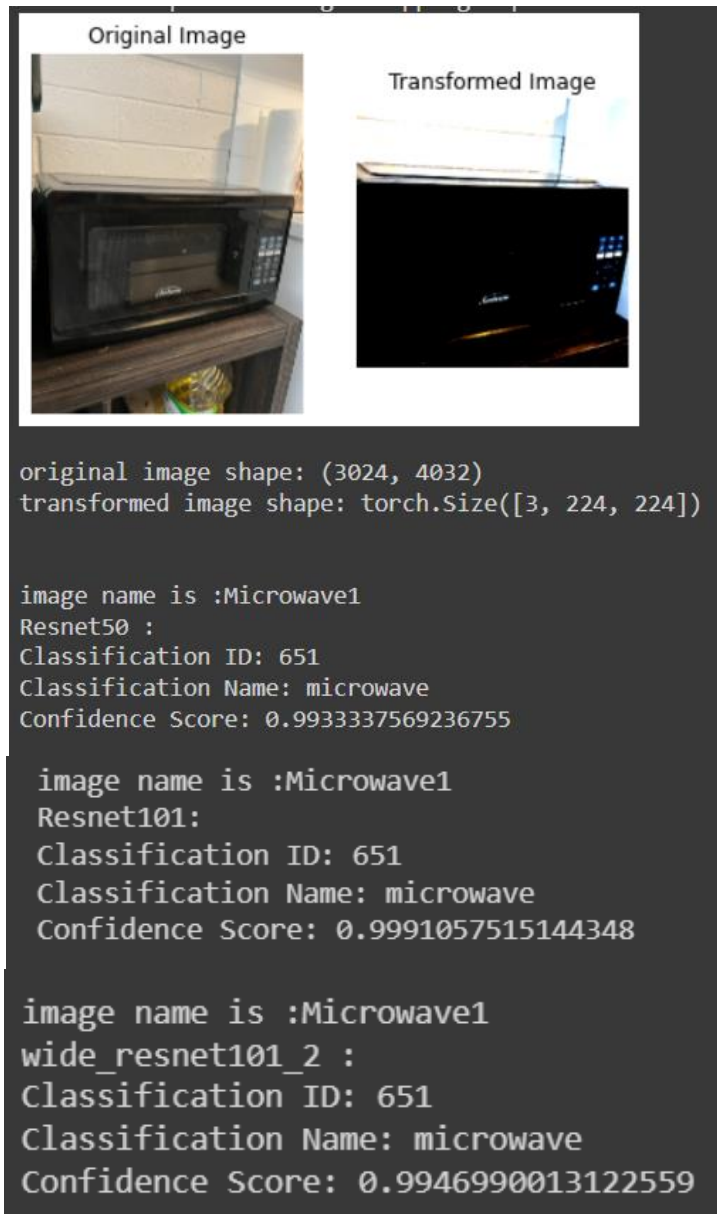
original image shape: (3024, 4032)
transformed image shape: torch.Size([3, 224, 224])

image name is :cup2
Resnet50 :
Classification ID: 659
Classification Name: mixing bowl
Confidence Score: 0.23655381798744202

image name is :cup2
Resnet101:
Classification ID: 659
Classification Name: mixing bowl
Confidence Score: 0.34273651242256165


image name is :cup2
wide_resnet101_2 :
Classification ID: 659
Classification Name: mixing bowl
Confidence Score: 0.34070897102355957

13. Microwave :




14. Mountain Bike :

Original Image



Transformed Image



```
original image shape: (4032, 3024)
transformed image shape: torch.Size([3, 224, 224])

image name is :bicycle2
Resnet50 :
Classification ID: 671
Classification Name: mountain bike
Confidence Score: 0.9901618957519531

image name is :bicycle2
Resnet101:
Classification ID: 671
Classification Name: mountain bike
Confidence Score: 0.9879796504974365

image name is :bicycle2
wide_resnet101_2 :
Classification ID: 671
Classification Name: mountain bike
Confidence Score: 0.9962563514709473
```

15. Stove :

original image shape: (3024, 4032)
transformed image shape: torch.Size([3, 224, 224])

image name is :stove2
Resnet50 :
Classification ID: 827
Classification Name: stove
Confidence Score: 0.4719502031803131

image name is :stove2
Resnet101:
Classification ID: 651
Classification Name: microwave
Confidence Score: 0.46907249093055725


image name is :stove2
wide_resnet101_2 :
Classification ID: 651
Classification Name: microwave
Confidence Score: 0.6633540391921997

16. Lemon :




17. Microwave :

Original Image



Transformed Image



```
original image shape: (3024, 4032)
transformed image shape: torch.Size([3, 224, 224])


image name is :Microwave2
Resnet50 :
Classification ID: 651
Classification Name: microwave
Confidence Score: 0.9342448711395264

image name is :Microwave2
Resnet101:
Classification ID: 651
Classification Name: microwave
Confidence Score: 0.9944396018981934


image name is :Microwave2
wide_resnet101_2 :
Classification ID: 651
Classification Name: microwave
Confidence Score: 0.9935797452926636
```

18. Mountain Bike :

Original Image



Transformed Image



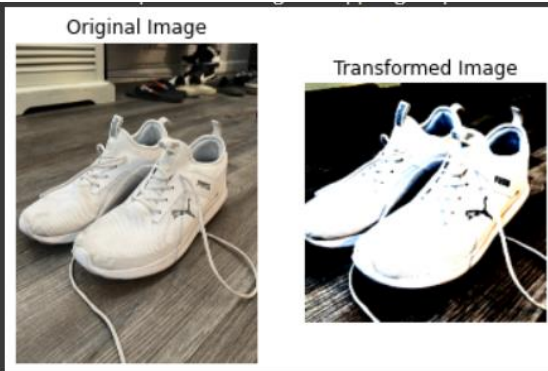
```
original image shape: (4032, 3024)
transformed image shape: torch.Size([3, 224, 224])

image name is :bicycle1
Resnet50 :
Classification ID: 671
Classification Name: mountain bike
Confidence Score: 0.9030066728591919

image name is :bicycle1
Resnet101:
Classification ID: 671
Classification Name: mountain bike
Confidence Score: 0.9767066240310669

image name is :bicycle1
wide_resnet101_2 :
Classification ID: 671
Classification Name: mountain bike
Confidence Score: 0.9778158664703369
```

19. Running shoes :



```
original image shape: (3024, 4032)
transformed image shape: torch.Size([3, 224, 224])
```

```
image name is :runningshoes2
Resnet50 :
Classification ID: 770
Classification Name: running shoe
Confidence Score: 0.9825771450996399
```

```
image name is :runningshoes2
Resnet101:
Classification ID: 770
Classification Name: running shoe
Confidence Score: 0.8546903729438782
```

```
image name is :runningshoes2
wide_resnet101_2 :
Classification ID: 770
Classification Name: running shoe
Confidence Score: 0.39589163661003113
```

20. Milk Can :

Original Image

Transformed Image

original image shape: (3024, 4032)
transformed image shape: torch.Size([3, 224, 224])

image name is :milkcan2
Resnet50 :
Classification ID: 899
Classification Name: water jug
Confidence Score: 0.3083231747150421

image name is :milkcan2
wide_resnet101_2 :
Classification ID: 899
Classification Name: water jug
Confidence Score: 0.4202151596546173

image name is :milkcan2
Resnet101:
Classification ID: 899
Classification Name: water jug
Confidence Score: 0.4880106449127197

Comparison Between Results from Part a, Part b And Partc.

