

CSC321 Assignment 4

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Part 1

1

Since we have the formula:

$$\frac{32 - 4 + 2P}{2} + 1 = 16$$

We can get $P = 1$

$$\frac{16 - 4 + 2P}{2} + 1 = 8$$

Get $P = 1$

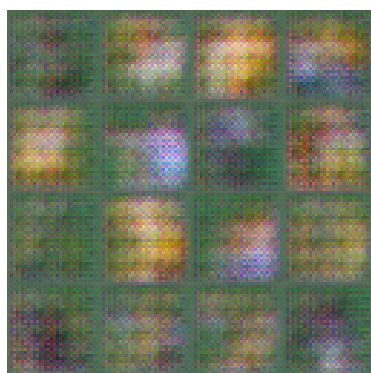
$$\frac{8 - 4 + 2P}{2} + 1 = 4$$

Get $P = 1$

$$\frac{4 - 4 + 2P}{2} + 1 = 1$$

Get $P = 0$

Experiment



(a) 200 iters



(b) 5600 iters

Figure 1: 200iter vs 5600iter

As we can see, the emoji it generates is much clearer, we cannot interpret anything from the result from 200 iterations. The texture is much clearer on 5600 iters.

Part 2

1

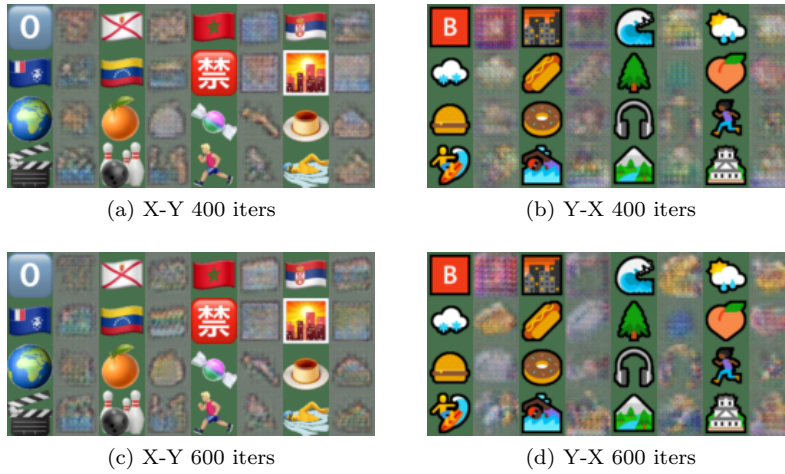


Figure 2: cycle-gan no pretrain without consistency_loss

2

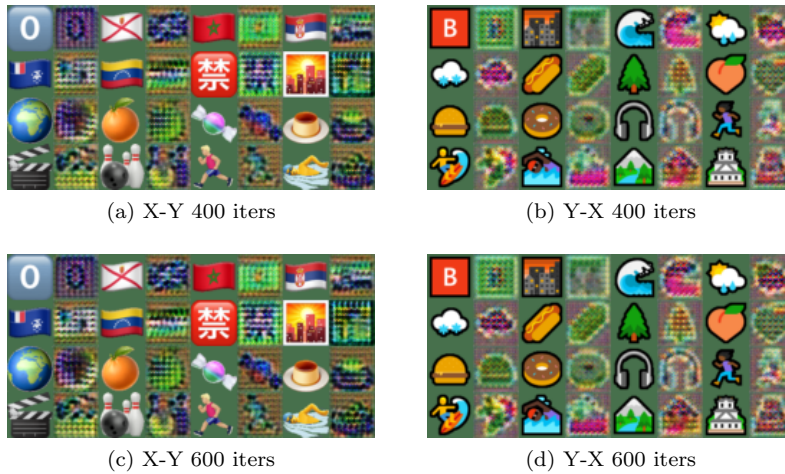


Figure 3: cycle-gan no pretrain with consistency_loss

3

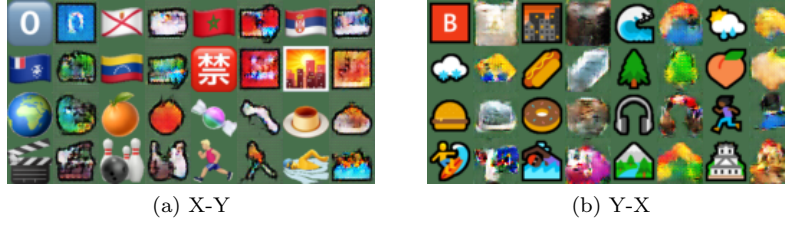


Figure 4: cycle-gan without consistency_loss

4

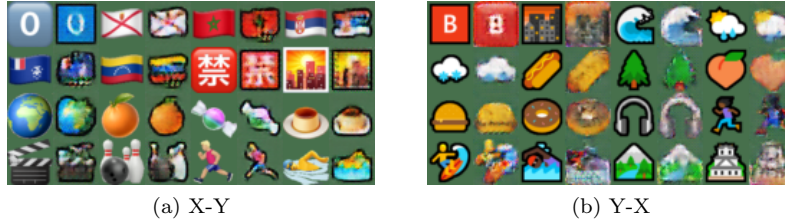


Figure 5: cycle-gan with consistency_loss

5

The result of cycle consistency loss has more accurate color(for the pretrained), it also has more accurate texture compare with the one without consistency. I think the cycle consistency loss has such improvement is because we calculate the difference between the generated and original picture, which helps the generator to produce the pictures closer to the original emoji.