HW3 Report

themis12@kaist.ac.kr / 010 2830 3651
20184448 Jo MinKi

1 Introduction

This model conduct the interpolation task with the video sequeance. Similarly to the pix2pix, every input data has the assigned target data. Basically this model make a same size of image which has high color range. The detail about the implementation are written in the README.md and in the python files.

2 Environment

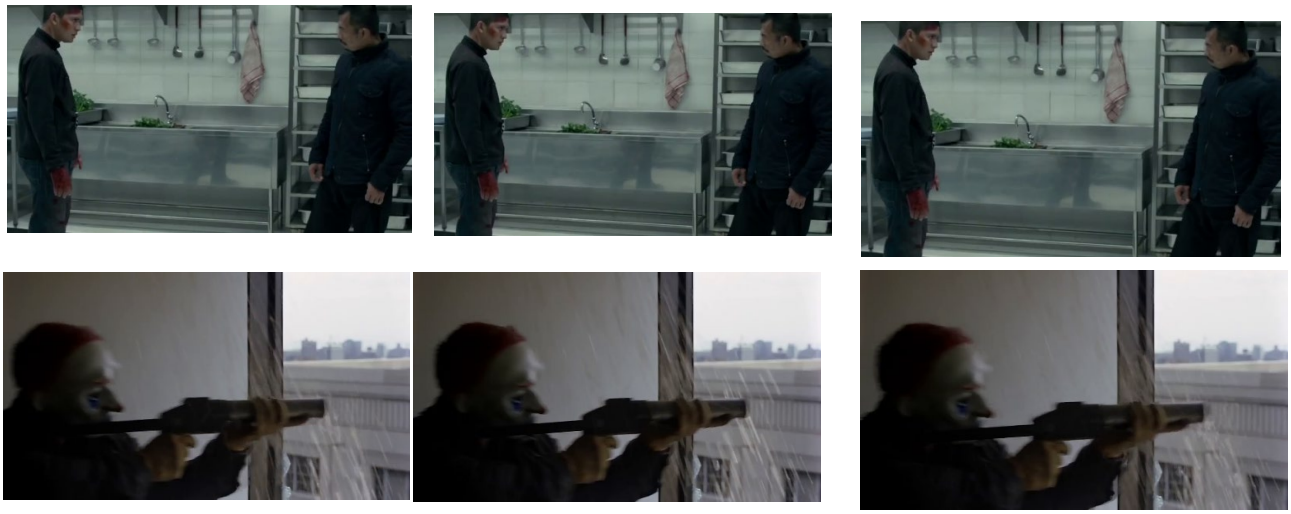
- L1 loss for the cost
- Adam optimizer (epsilon = 0.002)
- Learning rate: 0.0001

3 Result

```
Step: 00450     Cost: 0.030     PSNR: 34.6      SSIM: 0.825
Step: 00500     Cost: 0.018     PSNR: 31.7      SSIM: 0.947
Step: 00550     Cost: 0.021     PSNR: 33.5      SSIM: 0.918
Step: 00600     Cost: 0.024     PSNR: 31.1      SSIM: 0.943
Step: 00650     Cost: 0.036     PSNR: 31.2      SSIM: 0.866
Step: 00700     Cost: 0.012     PSNR: 35.6      SSIM: 0.975
Step: 00750     Cost: 0.009     PSNR: 42.6      SSIM: 0.990
Step: 00800     Cost: 0.019     PSNR: 35.0      SSIM: 0.982
Step: 00850     Cost: 0.014     PSNR: 34.8      SSIM: 0.971
Step: 00900     Cost: 0.032     PSNR: 33.8      SSIM: 0.936
Step: 00950     Cost: 0.027     PSNR: 29.0      SSIM: 0.935
Step: 01000     Cost: 0.039     PSNR: 27.9      SSIM: 0.942
```

Average PSNR = 32.3

Test example First & Third is input, middle one is the output



The produced image tends to show the luminance around the edge, which seems as a mixture of the former and later image. However, even though the edge part not recovered perfectly, the result image shows high PSNR and SSIM because most of the object are almost similar with the former & later image.

At the following example, first one is one of the input image and last one is the target image, and middle one is the output image that produced by the network.