
MLDS HW3-3

TAs
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Outline

- ❖ **Timeline**
- ❖ **Model**
- ❖ **Result**
- ❖ **Submission & Rules**
- ❖ **Q&A**

Timeline

Three Parts in HW3

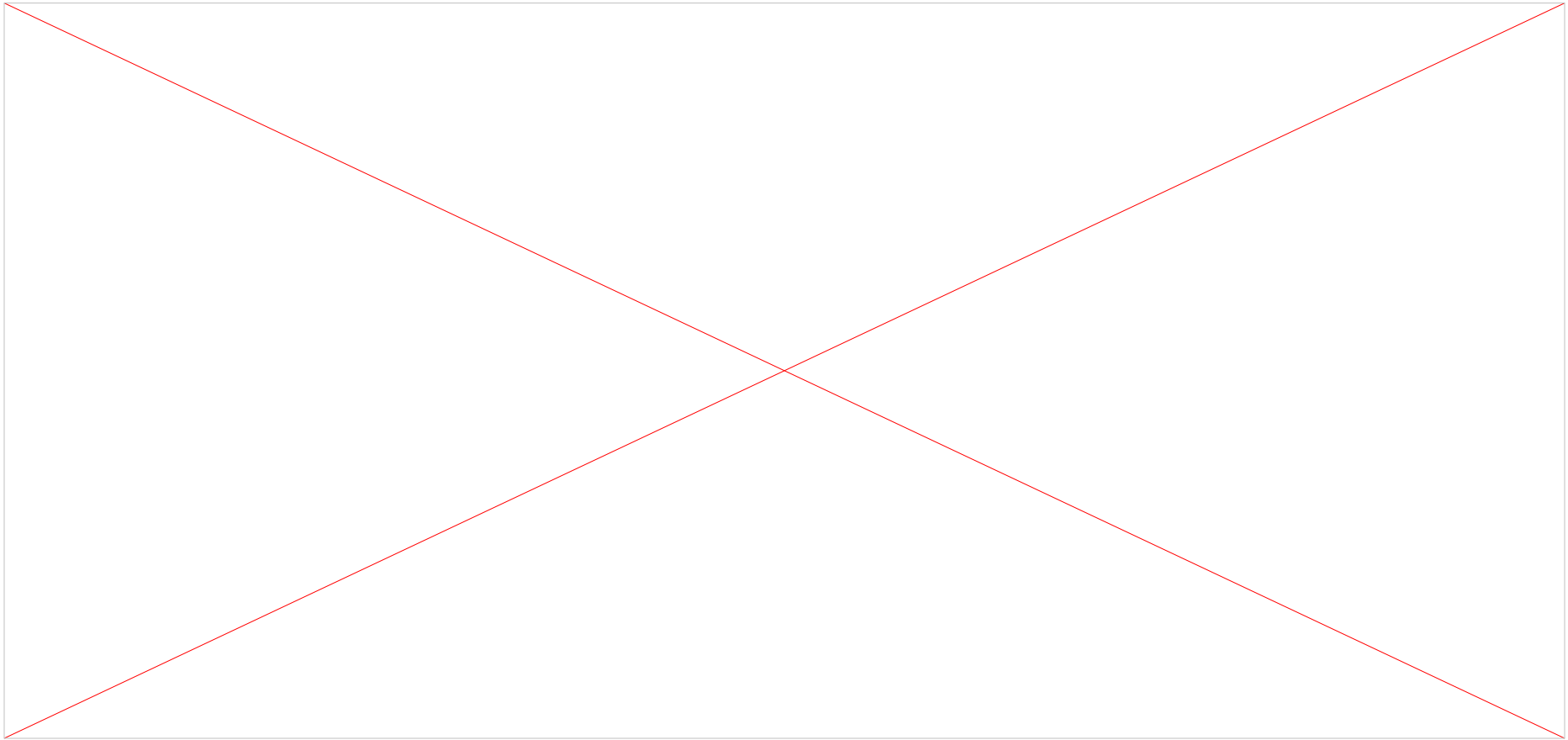
- (3-1) Image Generation
- (3-2) Text-to-Image Generation
- (3-3) Style Transfer (Bonus)

Schedule

- 5/4 :
 - Release HW3-1
- 5/11 :
 - Release HW3-2
- 5/18:
 - Release HW3-3
- 6/8:
 - All HW3 due (including HW3-1, HW3-2, HW3-3)
- 上台分享

Task Descriptions

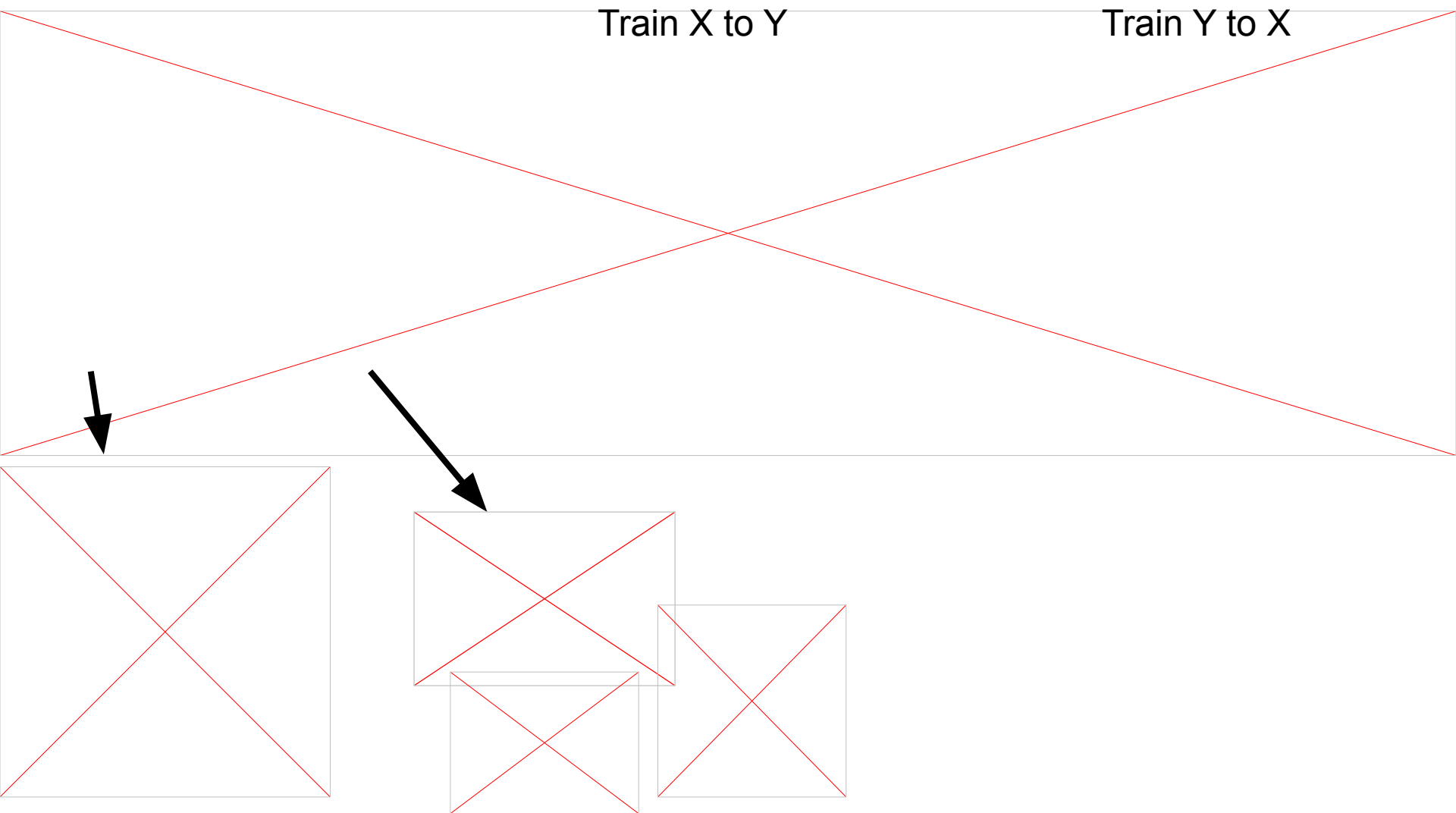
HW3-3: Style Transfer



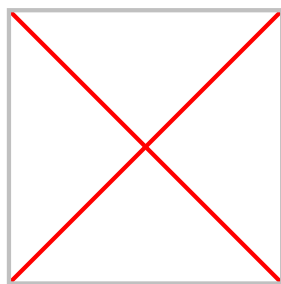
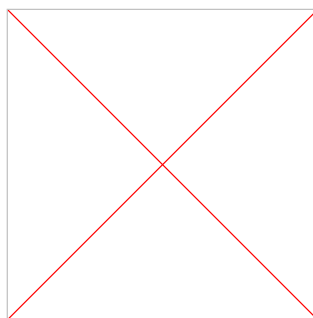
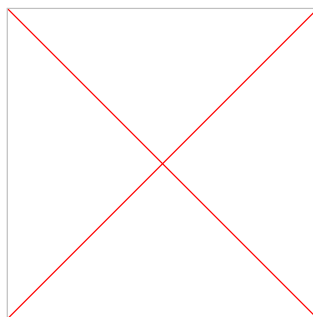
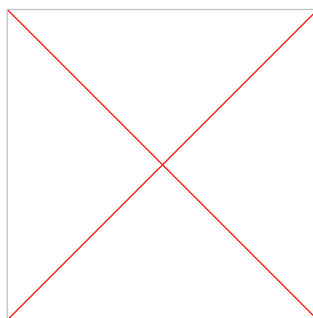
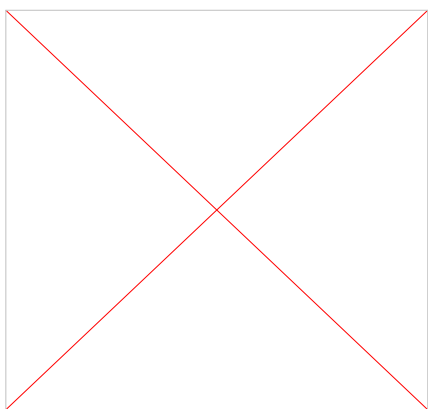
Ref: <https://arxiv.org/pdf/1703.10593.pdf>

Model

Cycle GAN



Cycle GAN Result



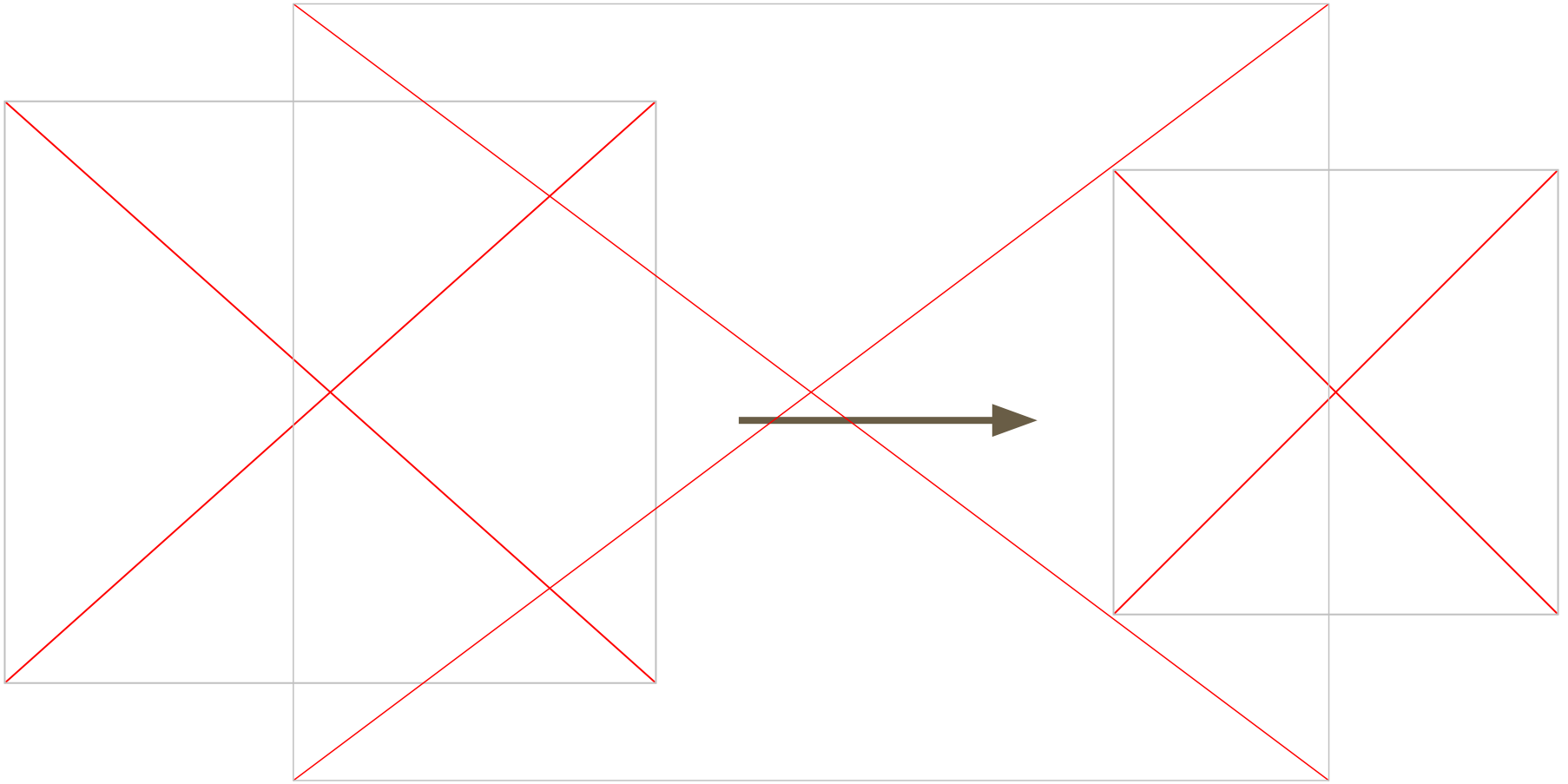
浮世繪教授

莫內教授

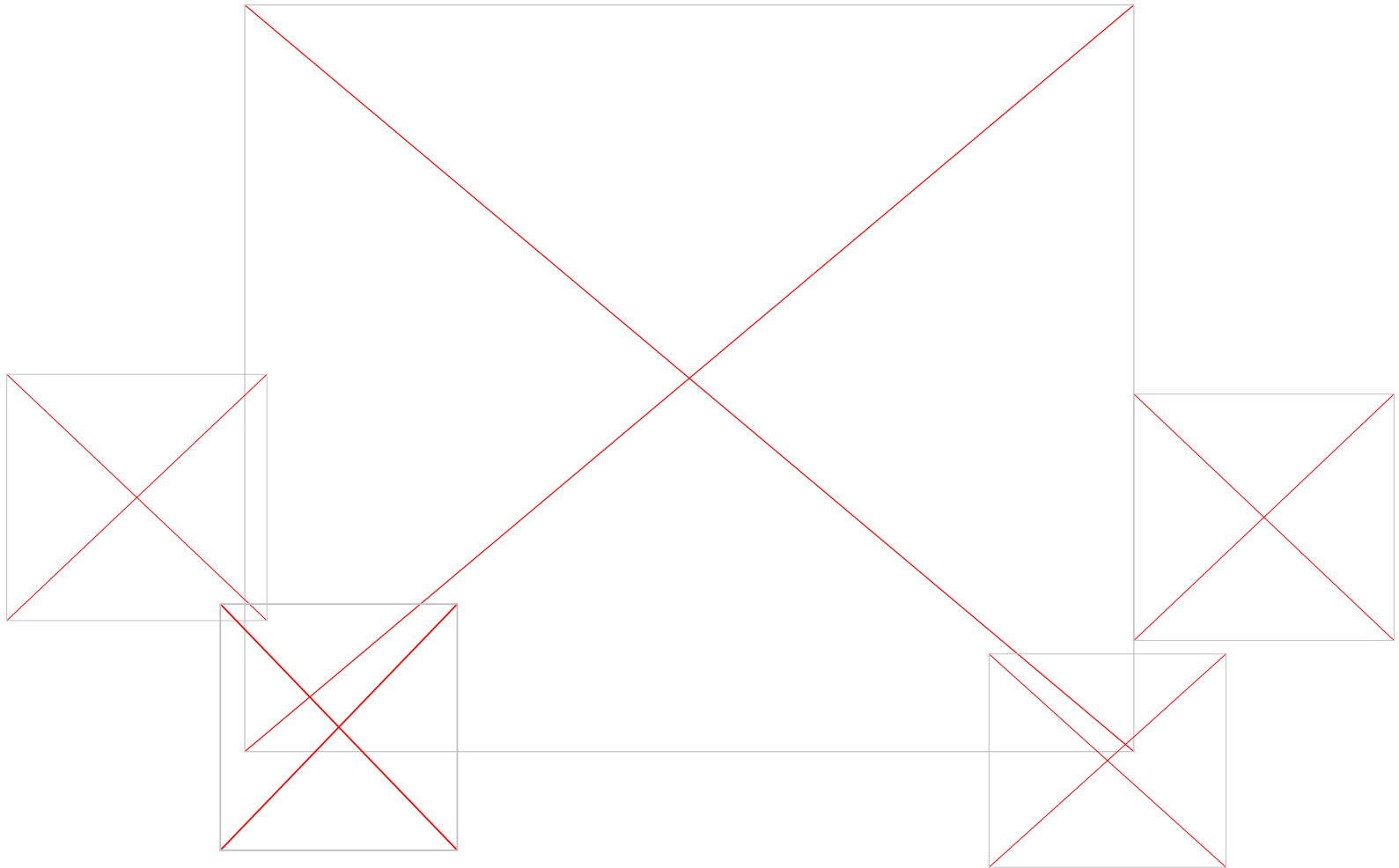
梵谷教授

動漫教授

Cycle GAN Result - zebra2horse

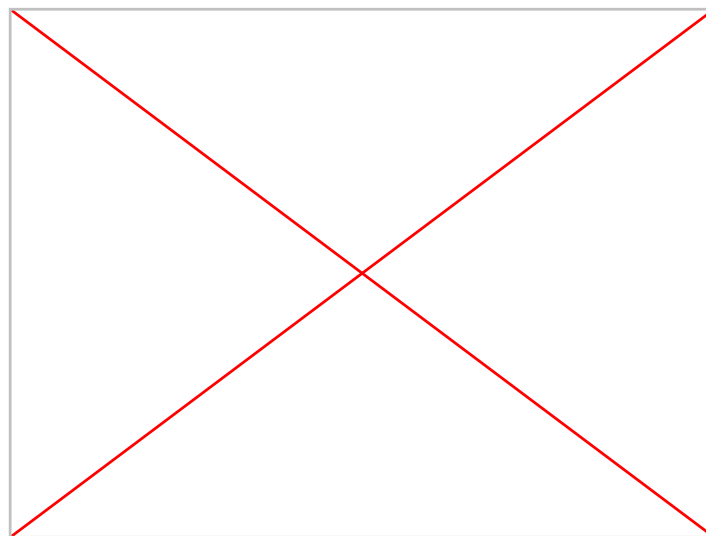


UNIT

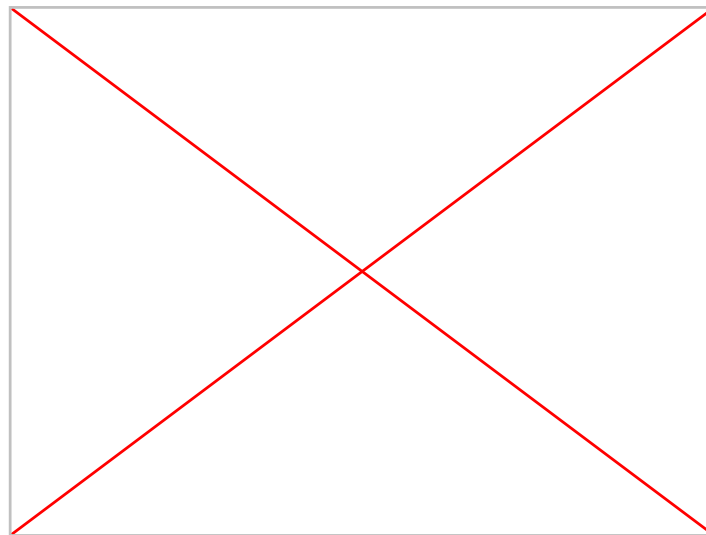


UNIT Result

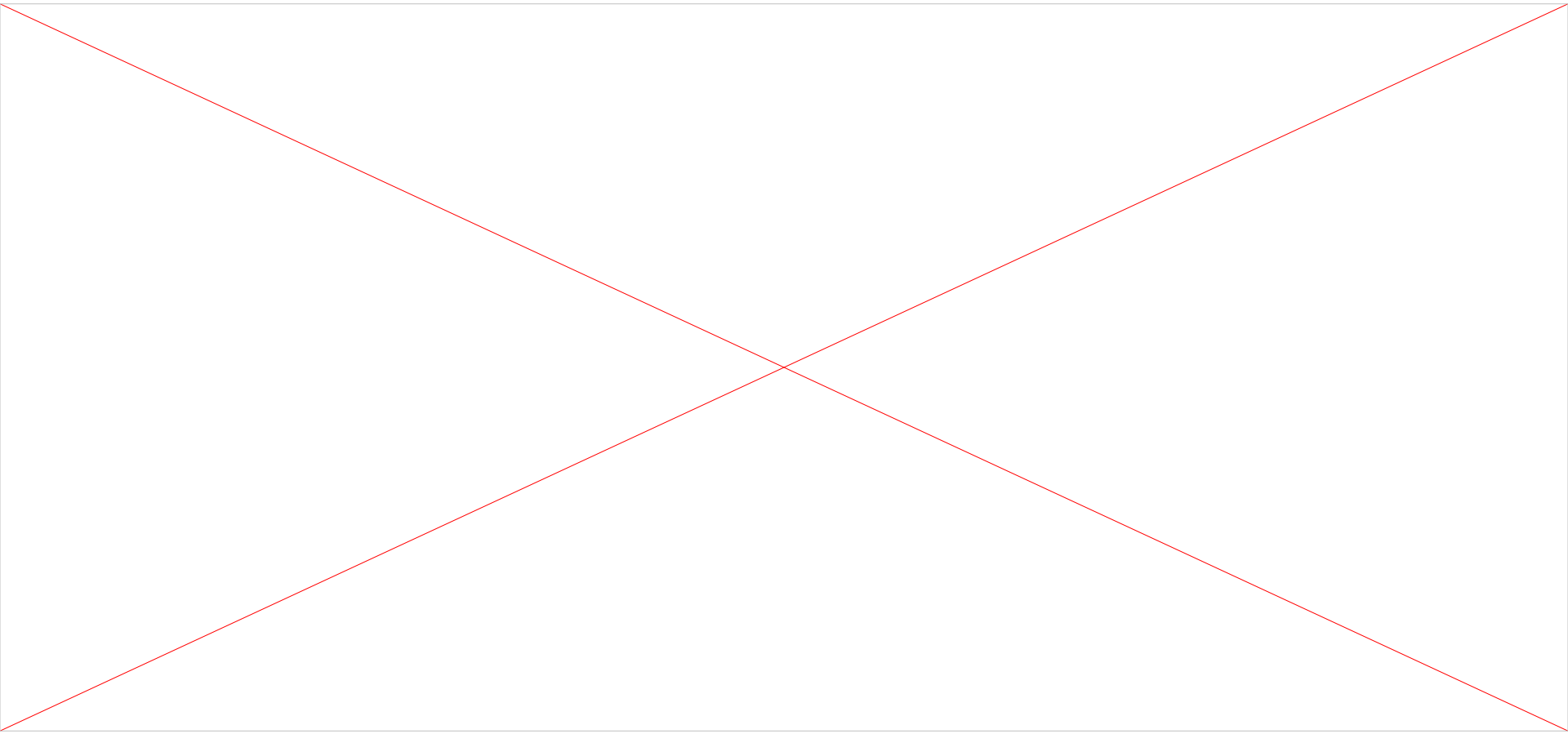
Anime2Real



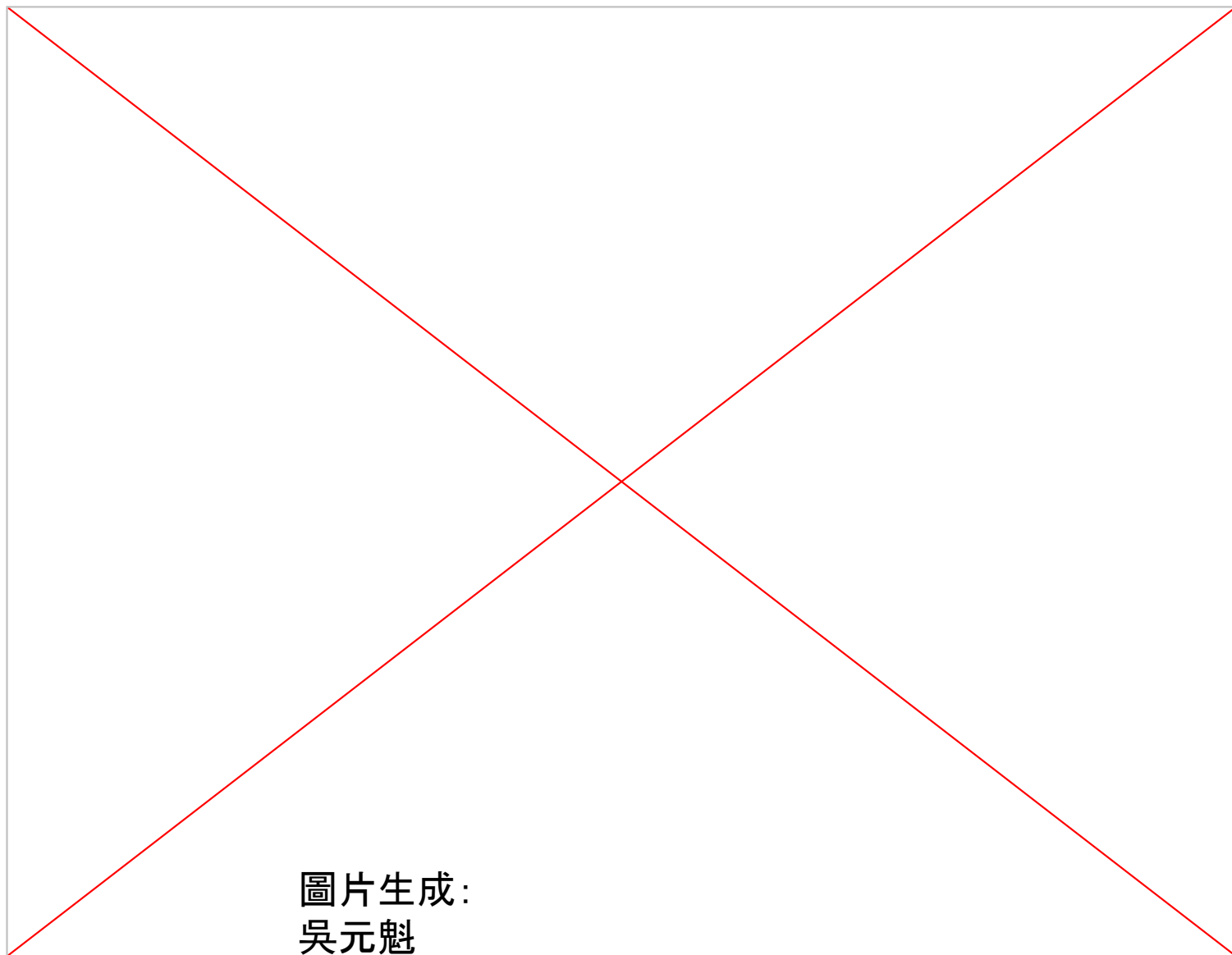
Real2Anime



StarGAN



Ref: <https://arxiv.org/pdf/1711.09020.pdf>



圖片生成：

吳元魁

Photo: Hung-Yi
Lee

Some Reference

- Code
 - CycleGAN: [PyTorch](#) (original), [Tensorflow](#)
 - StarGAN: [PyTorch](#) (original), [Tensorflow](#)
 - UNIT: [PyTorch](#) (original), [Tensorflow](#)
- Dataset
 - [CelebA](#)
- Other Model
 - DiscoGAN
 - DualGAN

Submission & Grading

HW3 Grading Policy:

- HW3-1 Code (image generation) : 5%
- HW3-2 Code (text-to-image generation): 5%
- Report : 15% (+2%)
 - **HW3-3 (Bonus, style transfer): 2%**
- 分工表 : 0.5%
- 上台分享 : 1%
- 上台分享前三名 : 1%

HW3 Report Questions

- Model Description
- Experiment settings and observation
 - Experiment: changing parameter..., data augmentation
 - You can use wgan, wgan-gp, lsgan in this section
 - **Comparison between gan and wgan, wgan-gp, lsgan should move to the next section**
- Compare your model with WGAN, WGAN-GP, LSGAN (choose 1) (**Image Generation Only**)
- Training tips for improvement (**Image generation Only**)
- Style Transfer (2%)

HW3-3 Report Grading

- Show your result (1%)
 - Two domain and transfer result
- Analysis (1%)
 - Which model you use and your observation
- Any Dataset(Style) is allowed
- Any Model is allowed
- Only inference is allowed

Submission

- Deadline: 2018/06/08 GMT+8 24:00
- **hw3/** should contain the following files:
 - **run_gan.sh (hw3-1)**
 - **run_cgan.sh (hw3-2)**
 - ~~extra_run.sh (hw3-3, bonus)~~ (Move into report)
 - **samples/, samples/gan_original.png, samples/cgan_original.png**
 - **report.pdf**
 - **pre-trained model, python code...**
 - If some files are too big, upload to your cloud and download them when running your run.sh
 - **紅字表示必要, 且名稱不得更改 其餘不限制**
- TAs will run your scripts in the following order to generate images
 - bash run_gan.sh (hw3-1)
 - bash run_cgan.sh **<testing_tags.txt>** (hw3-2)
 - All scripts must output in **10 minutes**.
 - shell script裡面請寫**相對路徑**
- **遲交沒有分開計算**

Q&A

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