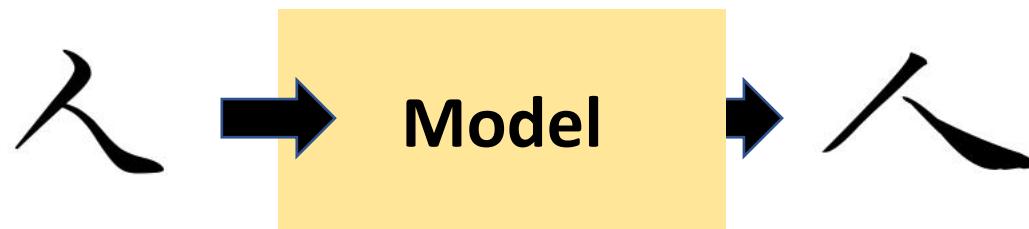




G08-Font2Font Interim Report

Group 8

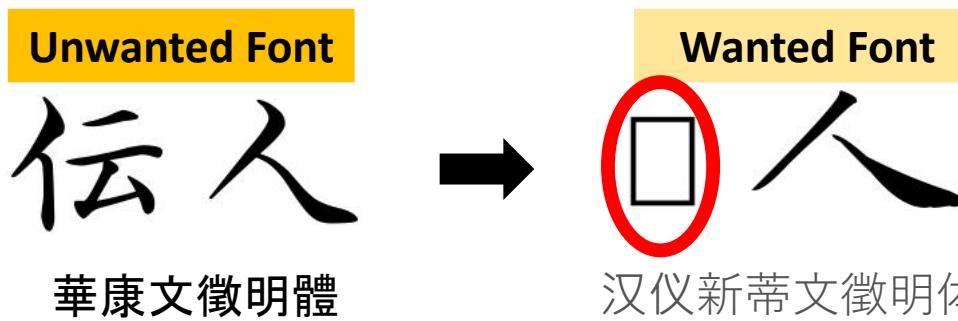
羅允辰、張簡崇堯、陳奕仁



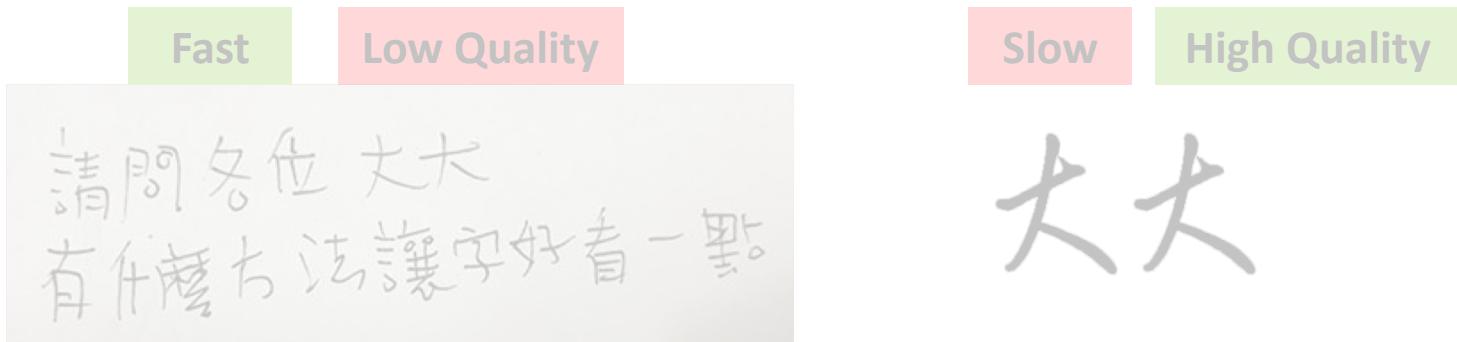


Motivations

- Missing words in Chinese fonts is unpleasant



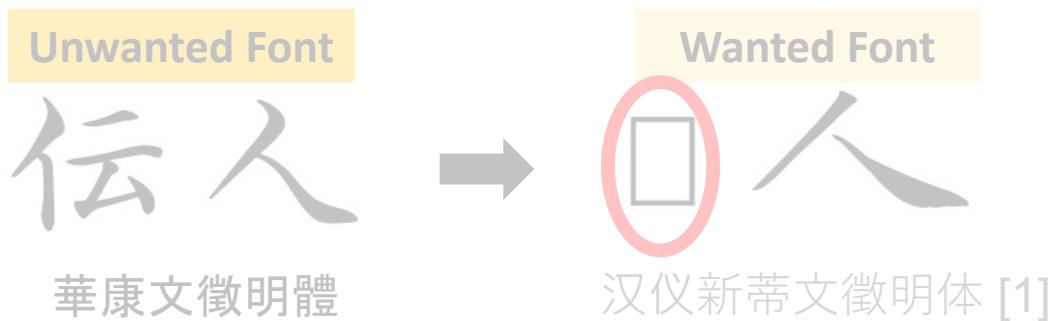
- Bad handwriting is hard to read, but often fast



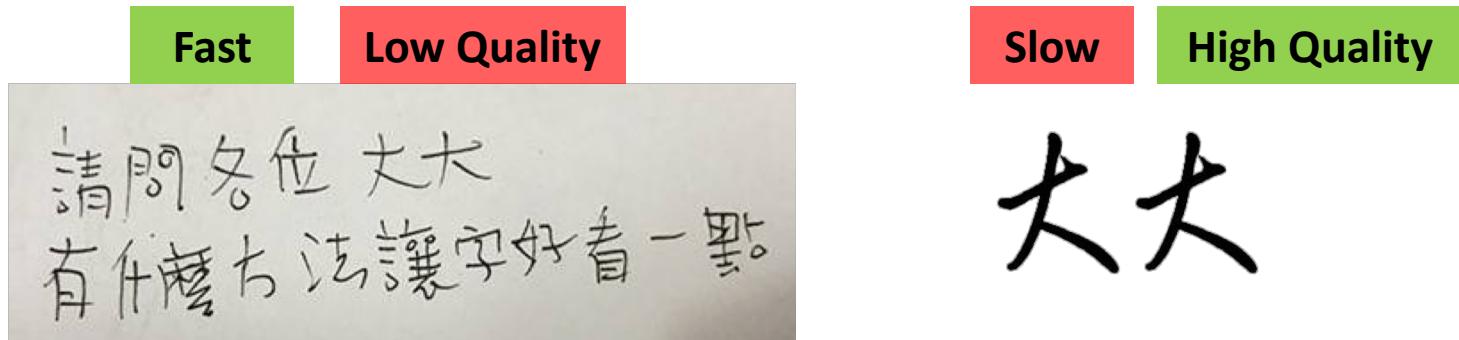


Motivations

- Missing words in Chinese fonts is unpleasant



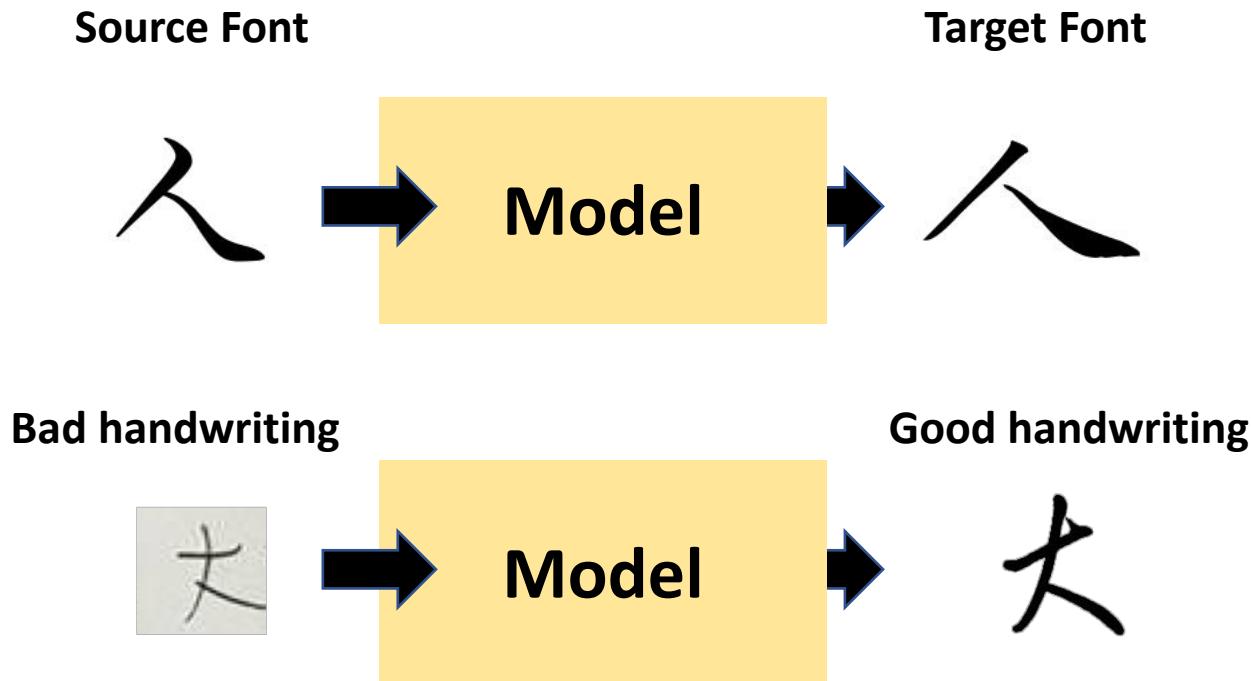
- Bad handwriting is hard to read, but often fast





Wanted Feature

- Model can transfer from source font to target font





Current Status

- **Prior Works Survey**
 - Generating handwritten Chinese characters using CycleGAN (WACV'18)
 - HGAN (BMVC'18) [2]
 - Other papers [3][4][5]
- **Github Projects Survey**
 - Rewrite [6]
 - Zi2zi [7]
- **Our Idea proposal (on zi2zi)**
 - Combine global & detail features
 - Specialized data augmentation for Chinese word
 - Find suitable model architecture for generator
 - Apply image processing technique to generated image

[2] Chinese Handwriting Imitation with Hierarchical Generative Adversarial Network

[3] Separating Style and Content for Generalized Style Transfer

[4] Handwritten Chinese Font Generation with Collaborative Stroke Refinement

[5] Auto-Encoder Guided GAN for Chinese Calligraphy Synthesis

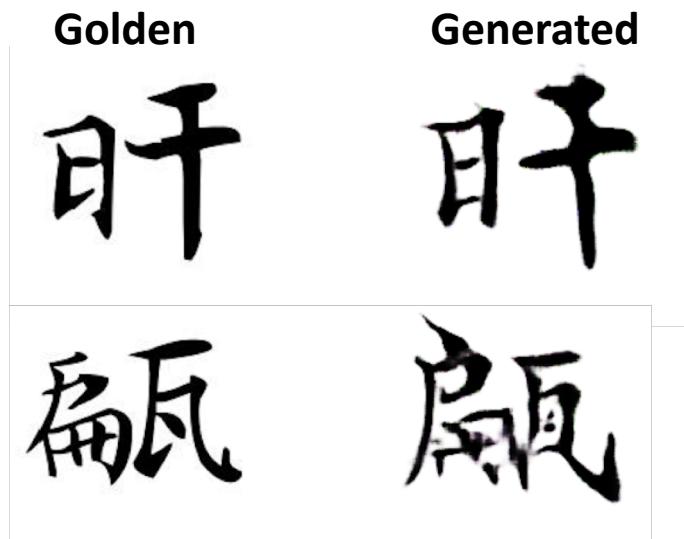
[6] <https://github.com/kaonashi-tyc/Rewrite>

[7] <https://github.com/kaonashi-tyc/zi2zi>

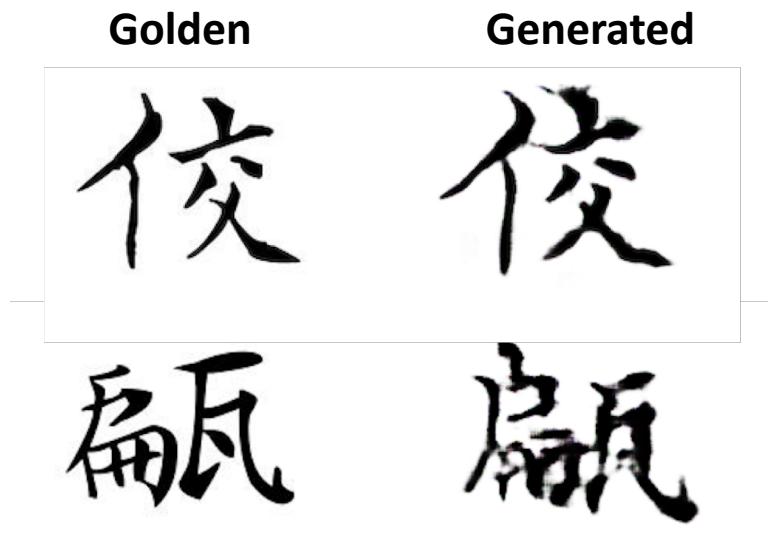


Current Status - Zi2zi Result

- Source font : 華康文徵明體
- Target font : 汉仪新蒂文徵明体



Batch_size 16
40 epoch

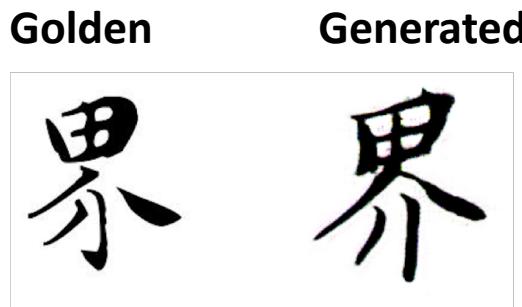
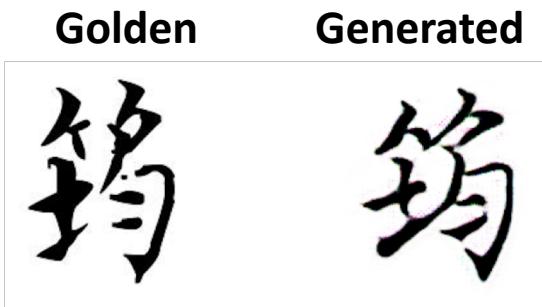


Batch_size 32
100 epoch



Current Status

- Combine Global & Detail features



- Augmentation



No augmentation
Batch_size:16, 40 epoch



Scale & Crop
Batch_size:16, 40 epoch



Current Status

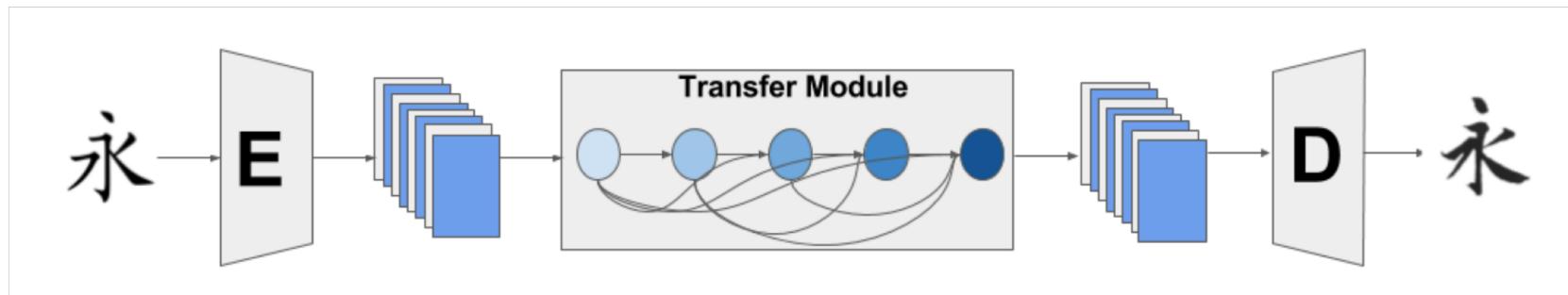
- Change model architecture
- Apply image processing to generated image (not done)

Questions?

Back-up Slides

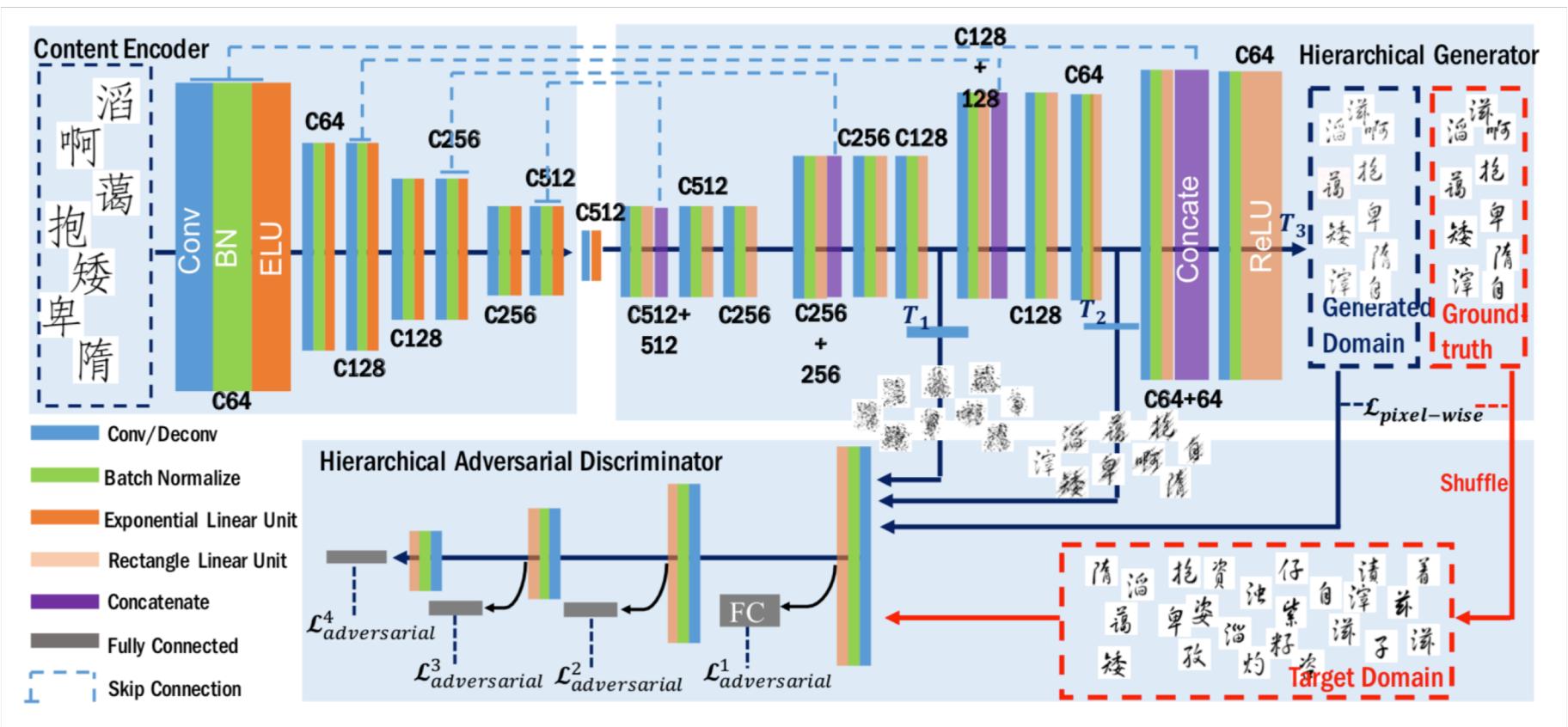
CycleGAN (WACV'18)

- **E** : Encodes image to lower dimensional space
- **Transfer Module** : Extract Features
- **D** : Decodes to target font



HGAN (BMVC'18)

- Feed Generator & Discriminator with different level of features



Zi2zi (Github)

- Improved from pix2pix, learn many fonts in 1 model

