In this experiment, we conduct an experiment to test sketch-based face generation from sketches using the sketches generated by facial masks.

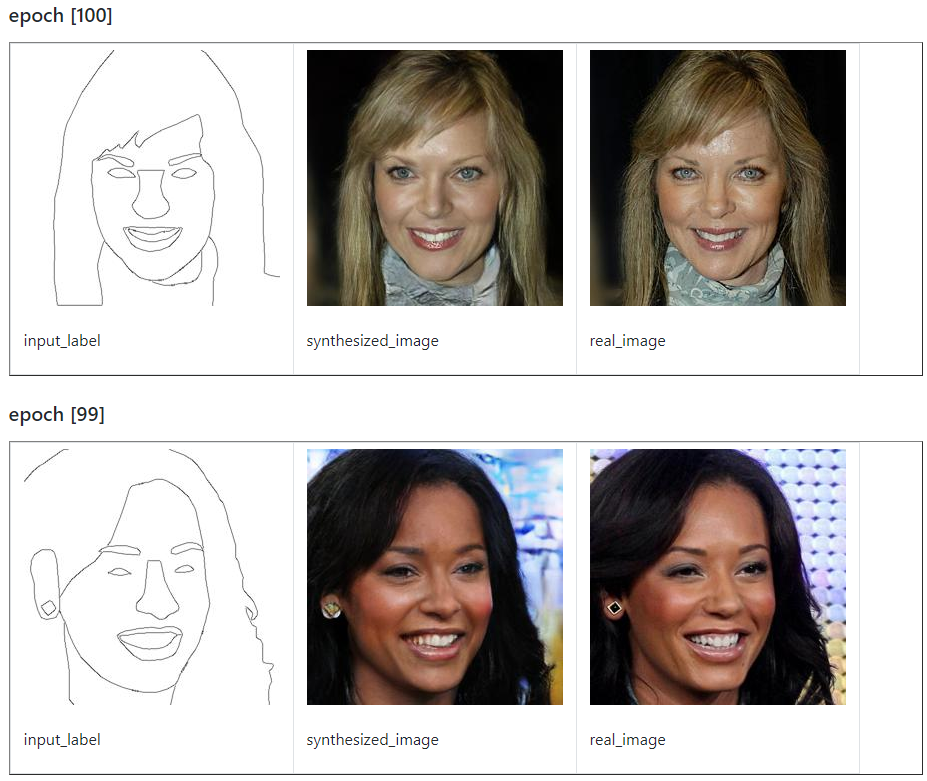
1. Settings
2. Model: pix2pixHD with global generator only?
3. Dataset:
   1. Generate sketches by extracting 1-pixel width edges from facial masks. \cite{reference for masks}

Show an example.

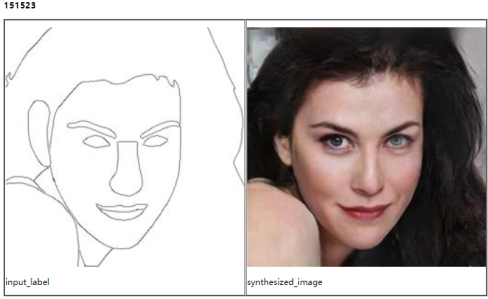
Fig: left: original image; middle: facial masks; right: generated sketch

* 1. Training dataset:
     1. Numbers
     2. Data augmentation?
  2. Hand-drawn sketches

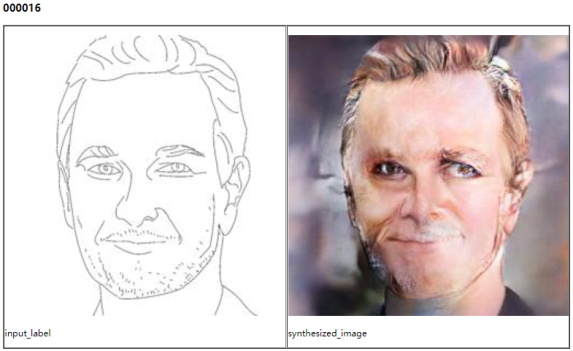
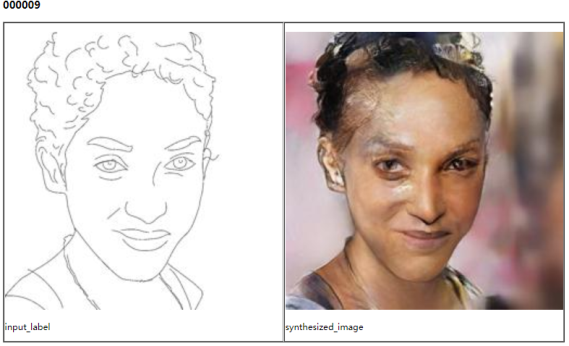
1. Results
   1. Training



* 1. Testing
     1. Synthesized sketches

* 1. Hand-drawn sketches



Questions: This model can generate good results for synthesized sketches. But it fails to generate good results for hand-drawn sketches. There might be two reasons. First, is the hand-drawn sketch globally aligned? If not, could you please manually transform it to a globally aligned shape and test the results?

Answer—with results.

This problem is supposed to be solved by adding random rotations and translations, which are/will be added to every training and to-train model, to the training data. So, it is unnecessary to manually transform the test hand-drawn examples.

Second, the hand-drawn sketch style is different from synthesized sketches since there are many details. Could you please simplify the hand-drawn sketches with different level of details?

Answer—with results.

If a model uses no instance normalization layers, the generated results of this model are supposed not to be affected by the level of details.

One possible way to simplify the hand-drawn sketches is to vectorize them and randomly remove lines.

1. Conclusion