# [Manipulated_Network]

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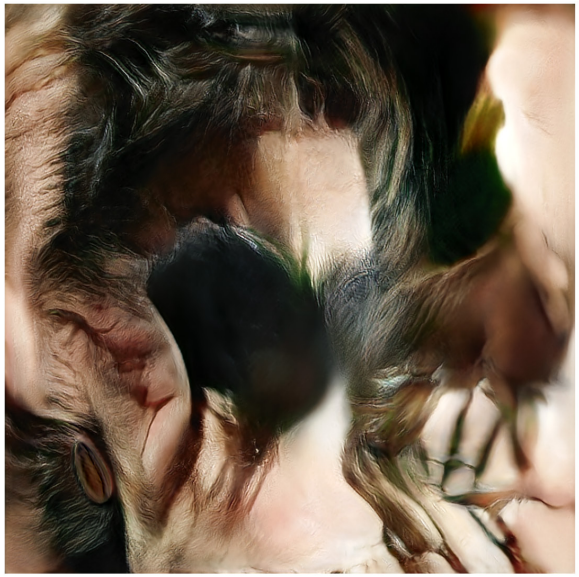
[prologue]

During the implementation of [Manipulated_Network], I've come across plenty of quirks and oddities generated from corrupted models. These models produce impossible, distorted but realistic images, diverted from the original outputs and sometimes lead to aesthetic preoccupations. Although utilising machine autonomous, creating this collection is still like a craft: I marked configurations that cause these semantically meaningful results, tweaked and built the operation template again, and then re-examined the subsequent images. The decisions can be either arbitrary or intentional, sometimes deliberate, all in order to create potentially aesthetic results.

During this process, I see the generative model as a tool, more like a pen or a camera operating according to human instructions.

Therefore, I hope to use a sketchbook as a medium to house these cooperated images.



Invert the first 4 row of intermediate latent vector,
Interpolating the first 8 row.
seed = 380134

Invert the 6th (top), 7th (middle row), 8th (bottom) intermediate latent vector,
Interpolating between 28526 and 5236.

Invert the 4th row of intermediate latent vector,
seed = 28526

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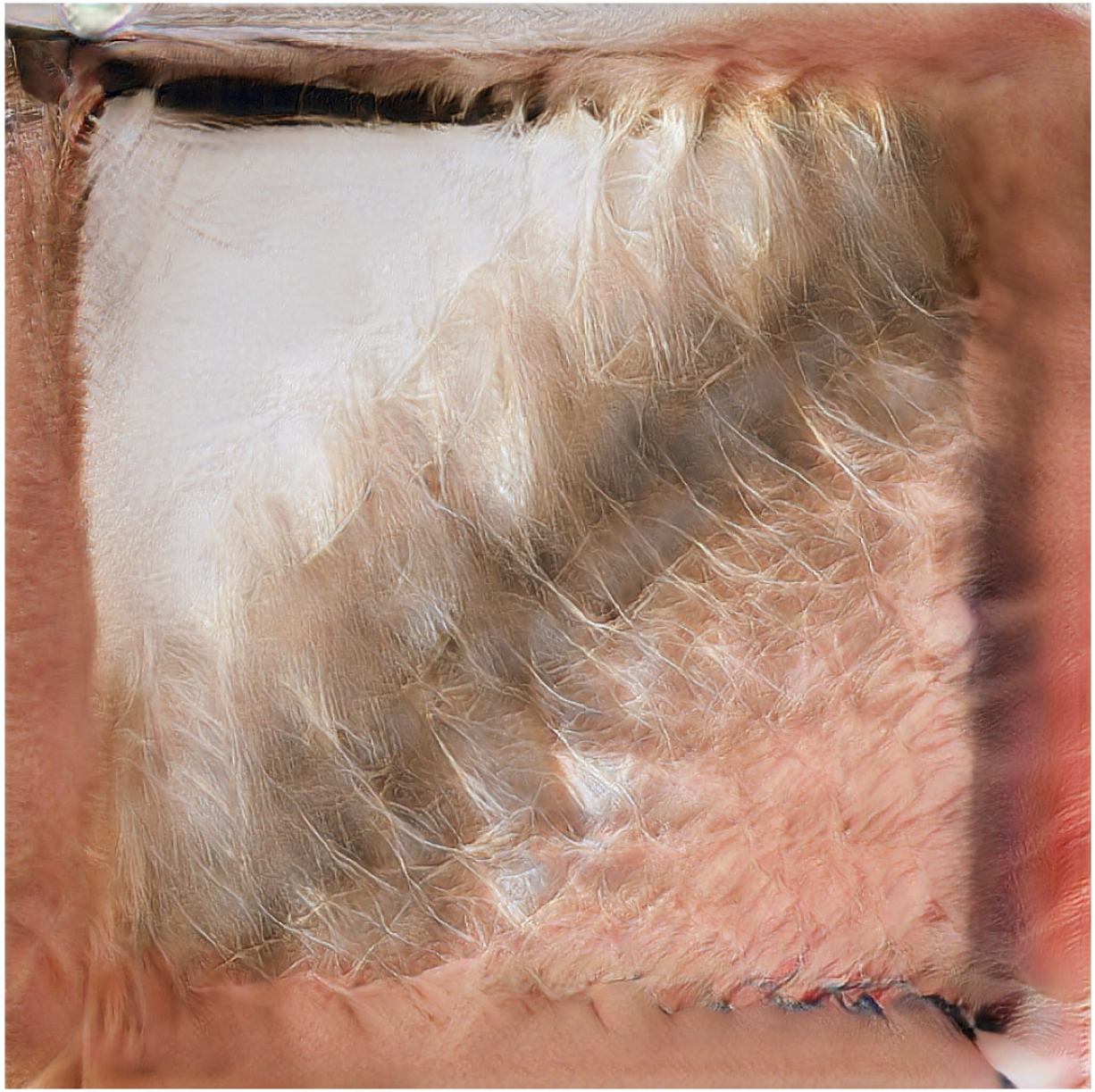
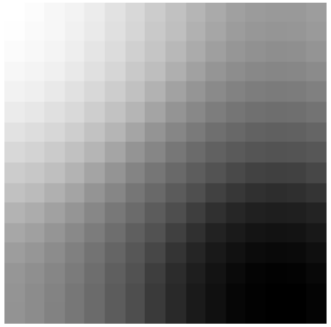
Set weight matrix in the 3rd convolution layer to zeros.





Replace all feature maps after conv_layer_04 [16x16, `Conv0`] by the gradient above.

Set weight matrix in the 4th convolution layer to ones,
Then apply instance normalisation.
[Cropped]

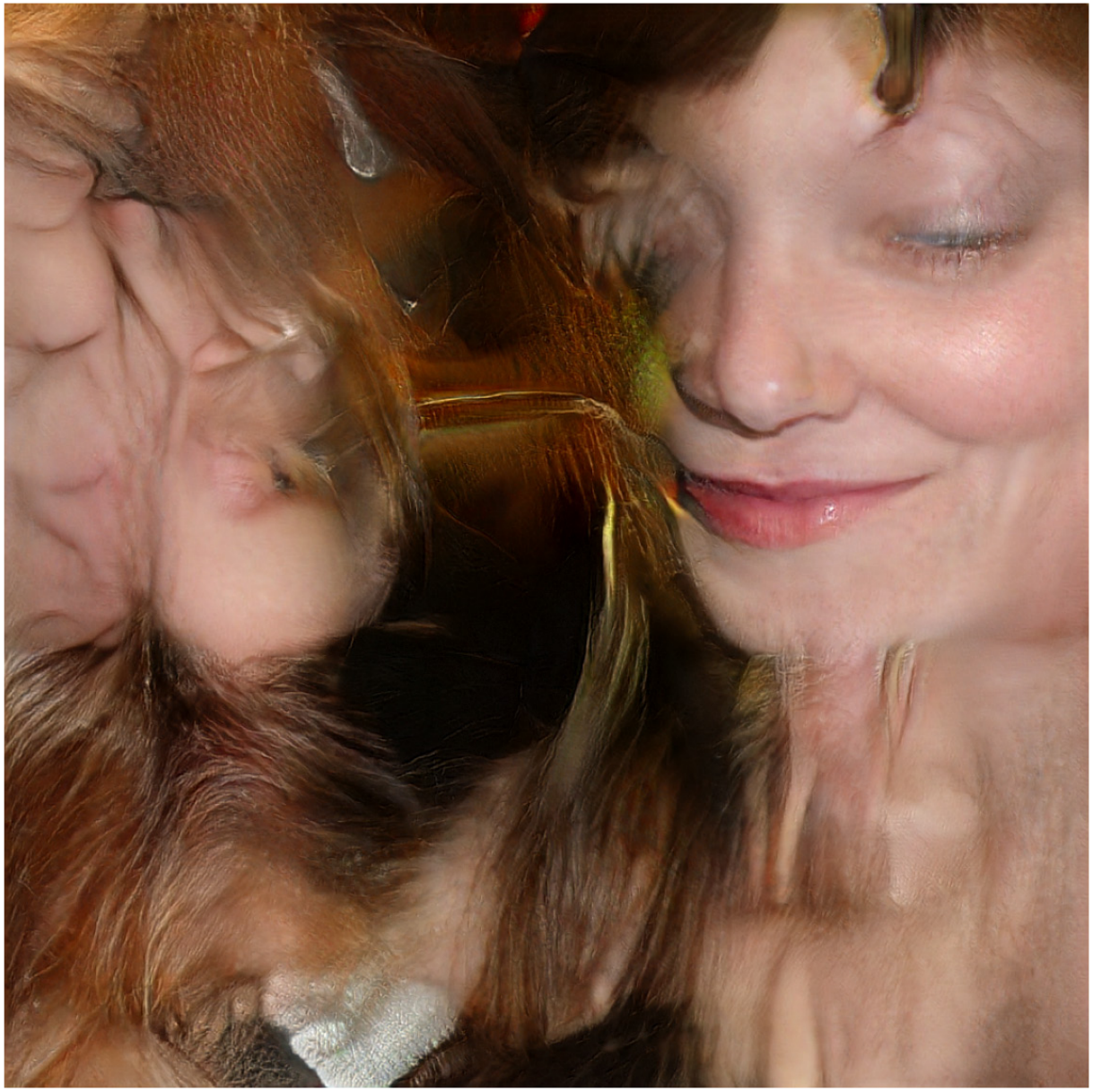
Apply mean filter with kernel size 5 after conv_layer_01,
Scale the clusters [2, 5, 6] by 4 after conv_layer_04,
Scale by -2 after conv_layer_06.

Translate by [2, 0] after conv_layer_00,
Scale the clusters [2, 5, 6] by 4 after conv_layer_04,
Scale by -2 after conv_layer_06.

[Chain operations on different clusters to intentionally remove facial elements and expand the features that generate hairs]

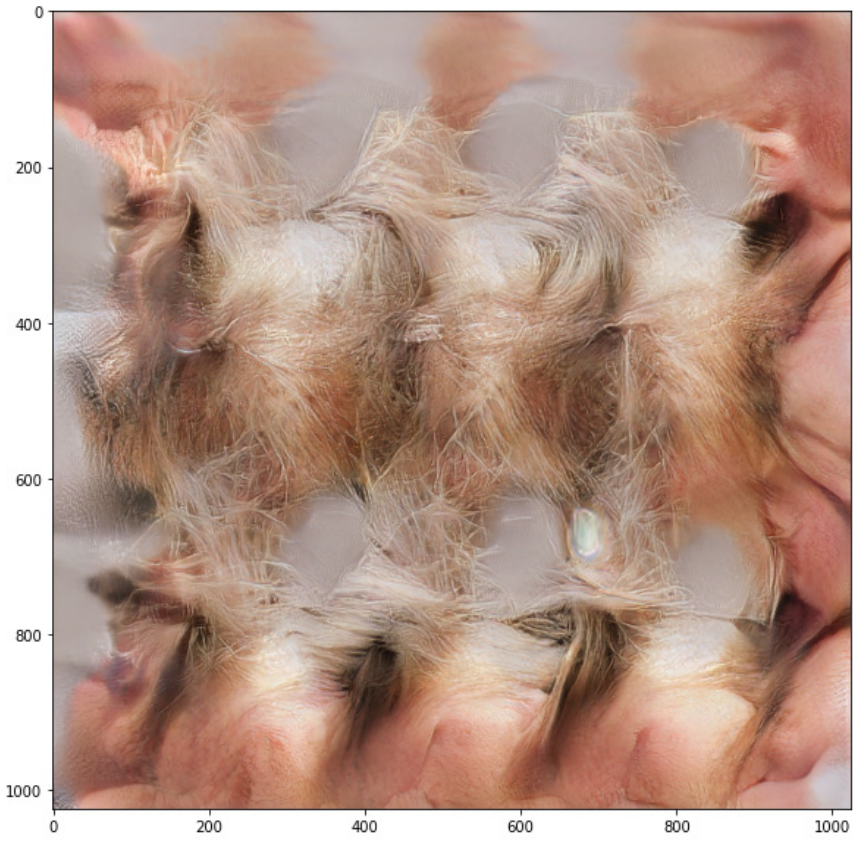
Add sharpen layer with factor = 3 after conv_layer_03,
After conv_layer_04:
Add erosion layer masked to clusters [1, 5, 6],
Apply mean filter with kernel size 5 masked to cluster 3,
Apply mean filter with kernel size 3 masked to cluster [2, 3],
Scale clusters [3, 7] by -6,
Scale clusters [1, 5, 6] by 8,
Add erosion layer masked to cluster [1, 5, 6] twice,
Add dilation layer masked to cluster [3, 7],
Scale cluster 0 by -8.

Apply mean filter to clusters [1, 5, 6] after conv_layer_04,
Scale clusters [1, 5, 6] by -2 after conv_layer_04,
seed = 5236 [left], seed = 28526 [right].



Add erosion layer after conv_layer_06.

Translate by [4, 0] after conv_layer_00,
Scale by -2 after conv_layer_02,
Then chain all operations in page 13,
Rotate by PI/2 after conv_layer_04.




[Missing_Record] but seems like replacing feature maps by sine operated gradients.

Translate by [4, 0] after conv_layer_00,
Scale by -2 after conv_layer_03,
Then chain all operations in page 13.

Apply mean filter after conv_layer_00,
Scale by -4 after conv_layer_02.

[left]
Add mean filter with kernel size 2 after conv_layer_00,
Scale clusters [2, 3] by -4 after conv_layer_04,
Scale by -4 after conv_layer_06.

[right]
Shuffle the feature maps by seed = 1 after conv_layer_00,
Scale by -4 after connv_layer_02.

Translate by [4, 0] after conv_layer_01,
After conv_layer_04:
Add erosion layer masked to clusters [1, 5, 6],
Apply mean filter with kernel size 5 masked to cluster 3,
Scale clusters [1, 5, 6] by 8,
Add erosion layer masked to cluster [1, 5, 6] twice,
Scale cluster 0 by -8,
[left] Translate by [0, 2].

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[Missing_Record]

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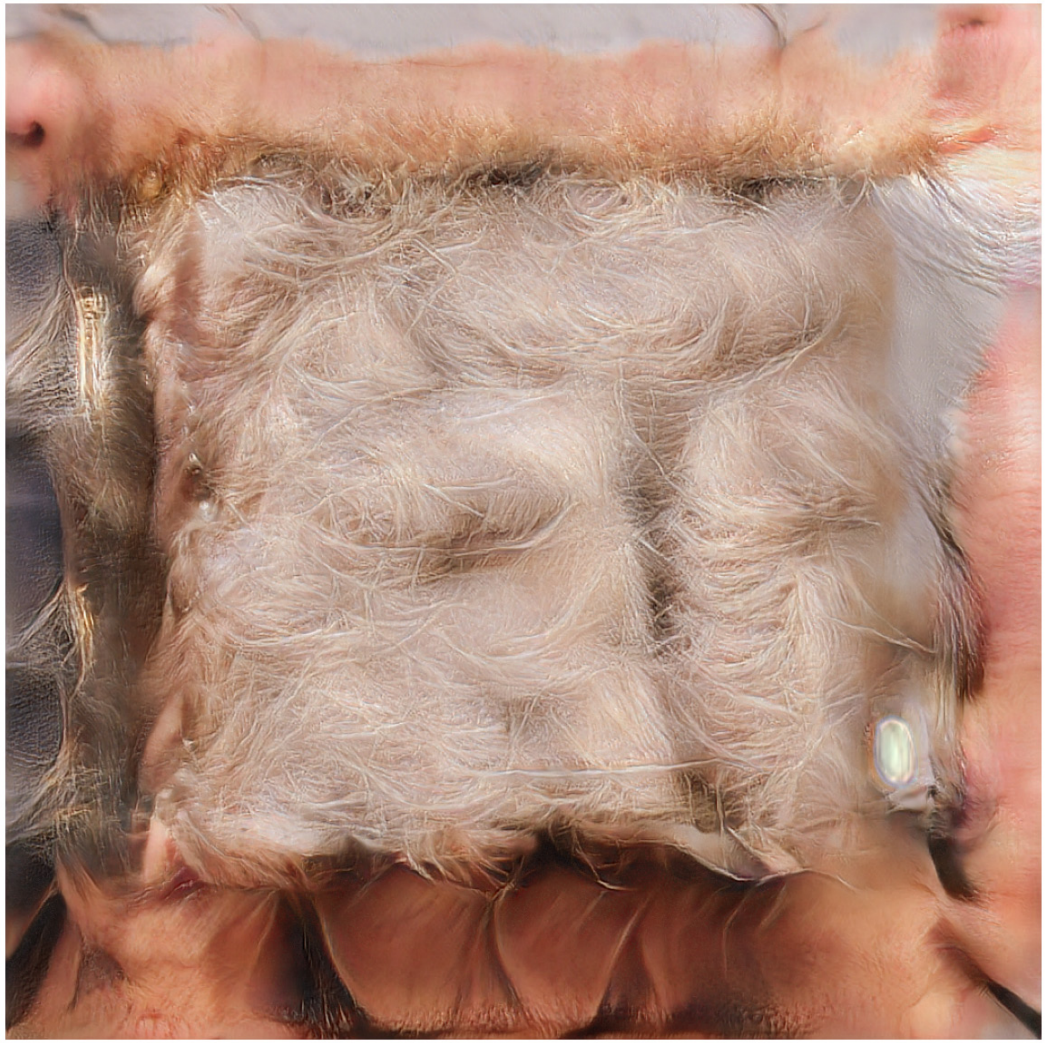
Shuffle feature maps by seed = 1 after conv_layer_01,
Scale by -4 after conv_layer_02.



Reset feature maps to zeros after conv_layer_03.

[left]
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[right]
Translate by [4, 0] after conv_layer_00,
Rotate by PI/3 after conv_layer_03,
Then chain all operations in page 13.

[epilogue]

While delicate programs autonomously produce artworks, human elements can quickly be hidden by algorithmic processes. Therefore, I see [Manipulated_Network] as an artistic technique to emphasise human elements in artworks created by generative models, expose individual variability, and find balances between machine autonomy and human creativity.