Omar Elsamahy 18102063

I Have Created **two** Models

1)

Generator Architecture

dense (Dense) multiple 3660800

batch\_normalization (BatchN multiple 146432

ormalization)

leaky\_re\_lu (LeakyReLU) multiple 0

reshape (Reshape) multiple 0

upsample (Upsample) multiple 1639680

upsample\_1 (Upsample) multiple 819840

upsample\_2 (Upsample) multiple 205120

conv2d\_transpose\_3 (Conv2DT multiple 4803

Discriminator arch

input\_1 (InputLayer) [(None, 104, 88, 3)] 0

cnn\_block (CNNBlock) multiple 2432

cnn\_block\_1 (CNNBlock) multiple 51264

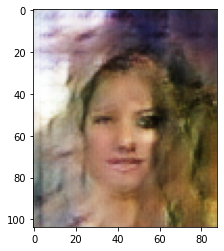
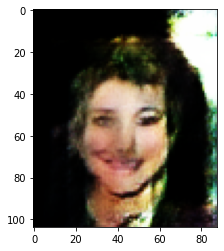
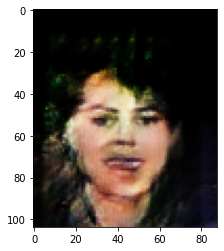
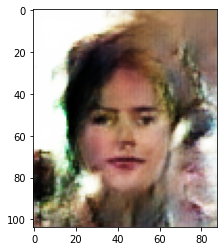
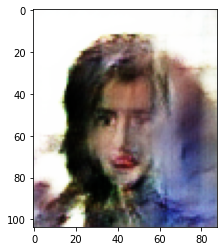
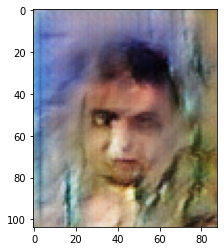
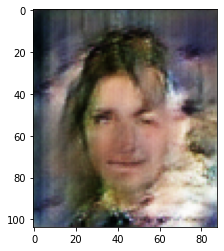
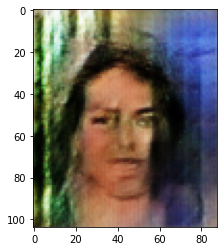
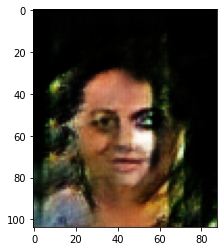
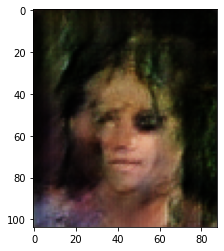
cnn\_block\_2 (CNNBlock) multiple 204928

cnn\_block\_3 (CNNBlock) multiple 819456

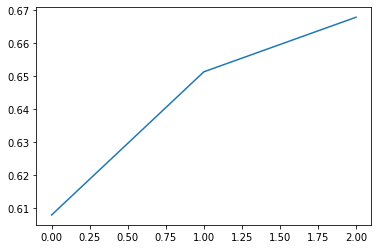
flatten (Flatten) multiple 0

dense\_1 (Dense) multiple 585729

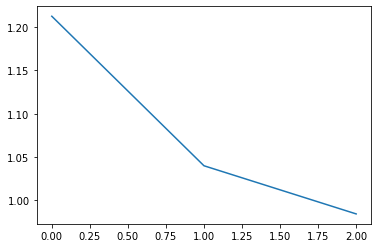
10 Images



Discriminator Loss



Generator Loss



Second Model Architecture

Model: "discriminator"

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Layer (type) Output Shape Param #

=================================================================

conv2d\_7 (Conv2D) (None, 32, 32, 64) 3136

leaky\_re\_lu\_15 (LeakyReLU) (None, 32, 32, 64) 0

conv2d\_8 (Conv2D) (None, 16, 16, 128) 131200

leaky\_re\_lu\_16 (LeakyReLU) (None, 16, 16, 128) 0

conv2d\_9 (Conv2D) (None, 8, 8, 128) 262272

leaky\_re\_lu\_17 (LeakyReLU) (None, 8, 8, 128) 0

flatten\_1 (Flatten) (None, 8192) 0

dropout\_1 (Dropout) (None, 8192) 0

dense\_5 (Dense) (None, 1) 8193

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Total params: 404,801

Trainable params: 404,801

Non-trainable params: 0

Model: "generator"

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Layer (type) Output Shape Param #

=================================================================

dense\_6 (Dense) (None, 8192) 1056768

reshape\_4 (Reshape) (None, 8, 8, 128) 0

conv2d\_transpose\_12 (Conv2D (None, 16, 16, 128) 262272

Transpose)

leaky\_re\_lu\_18 (LeakyReLU) (None, 16, 16, 128) 0

conv2d\_transpose\_13 (Conv2D (None, 32, 32, 256) 524544

Transpose)

leaky\_re\_lu\_19 (LeakyReLU) (None, 32, 32, 256) 0

conv2d\_transpose\_14 (Conv2D (None, 64, 64, 512) 2097664

Transpose)

leaky\_re\_lu\_20 (LeakyReLU) (None, 64, 64, 512) 0

conv2d\_10 (Conv2D) (None, 64, 64, 3) 38403

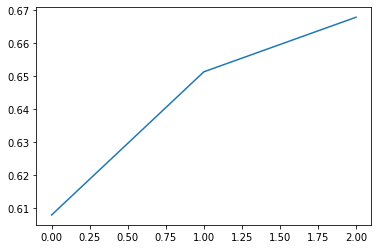
=================================================================

Total params: 3,979,651

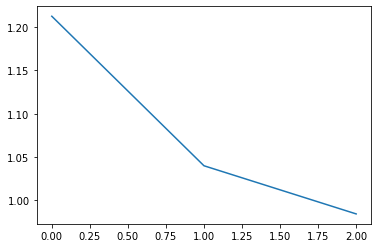
Trainable params: 3,979,651

Non-trainable params: 0

Discriminator Loss



Generator Loss



**Images Generated :**

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