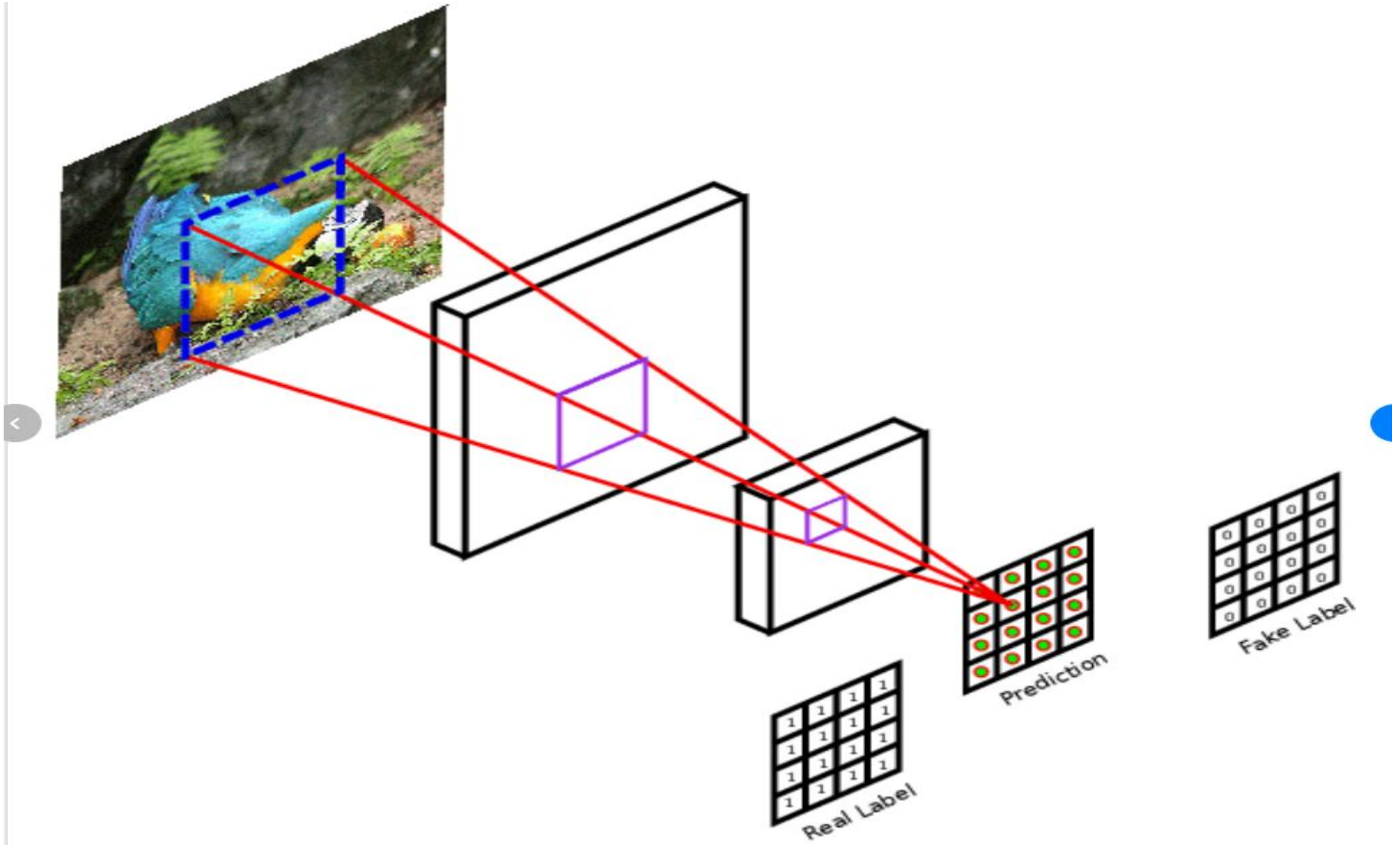
Pix2Pix GAN – Paired Image

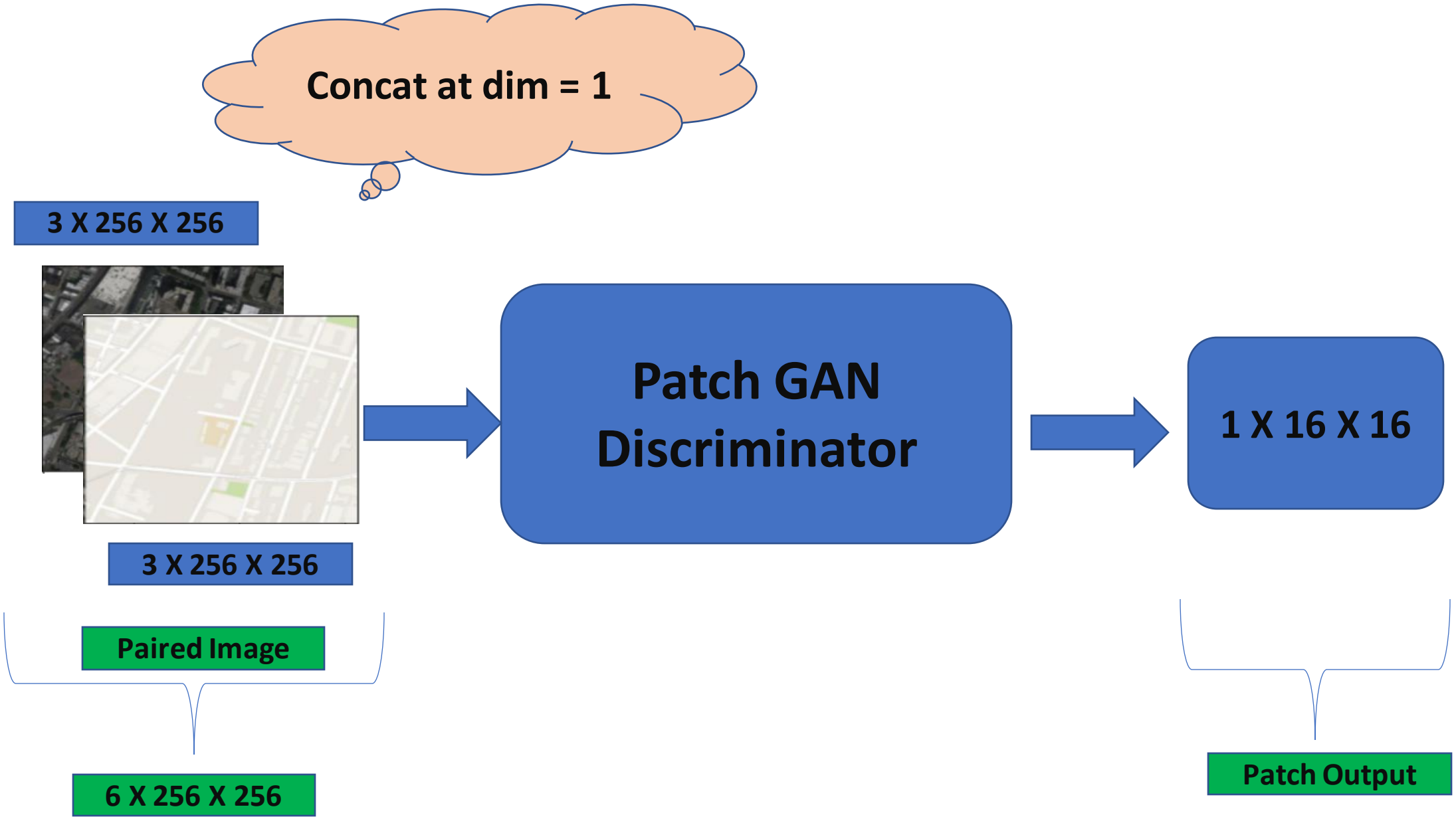
Patch Discriminator

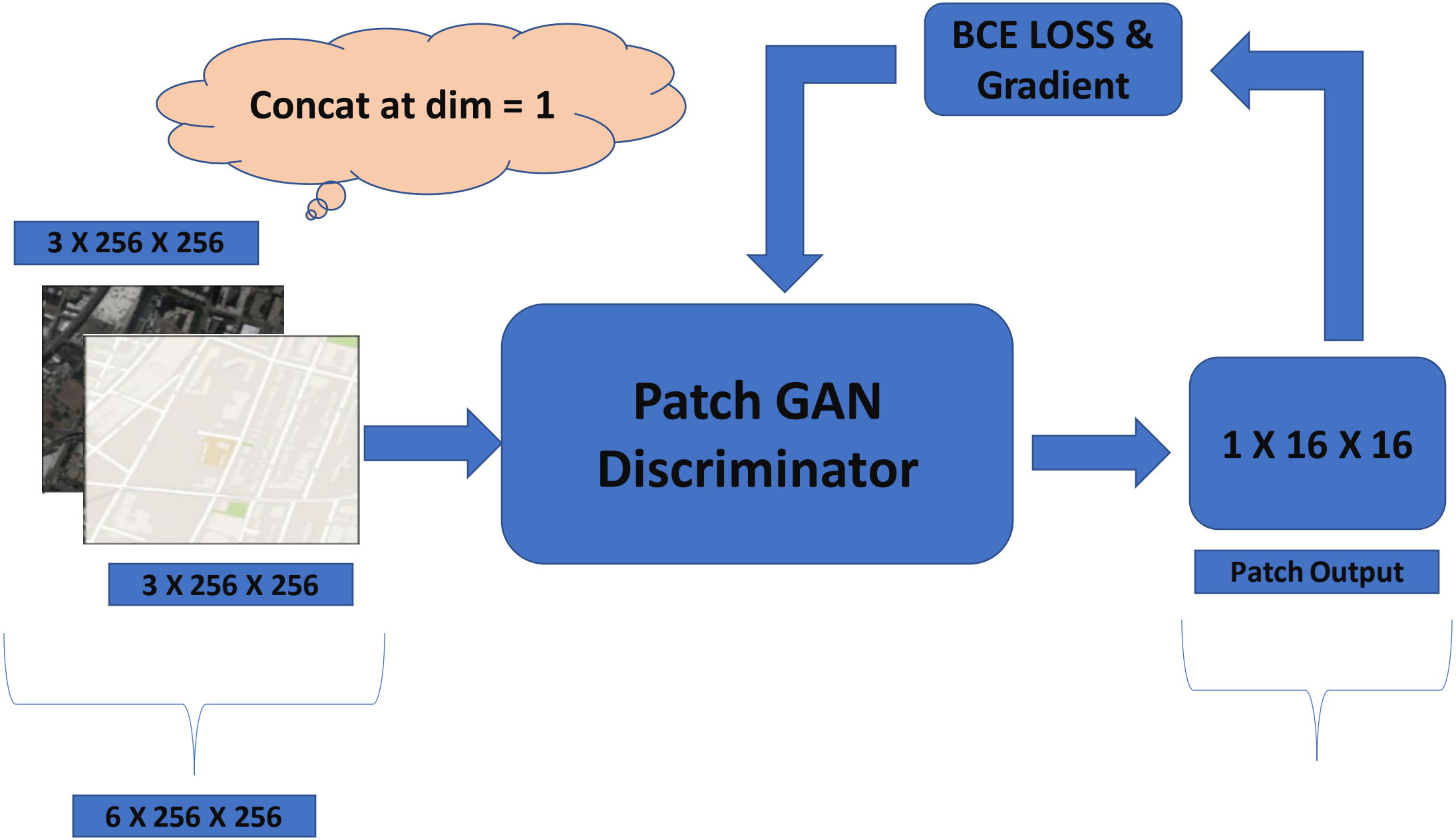
UNet Generator



PatchGAN discriminator. Each value of the output matrix represents the probability of whether the corresponding image patch is real or it is artificially generated.

Source: https://www.researchgate.net/figure/PatchGAN-discriminator-Each-value-of-the-output-matrix-represents-the-probability-of_fig1_323904616

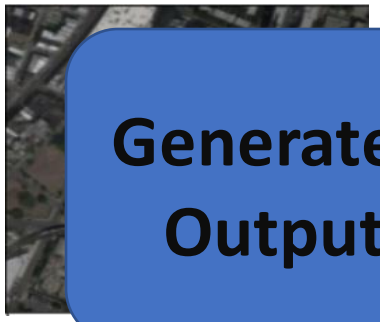

Concat at dim = 1
3 X 256 X 256
3 X 256 X 256
Paired Image
6 X 256 X 256
Patch GAN Discriminator
1 X 16 X 16
Patch Output


Concat at dim = 1
BCE LOSS & Gradient
3 X 256 X 256
3 X 256 X 256
Patch GAN Discriminator
1 X 16 X 16
Patch Output
6 X 256 X 256

Unet Generator

Unet Generator

Generated Output



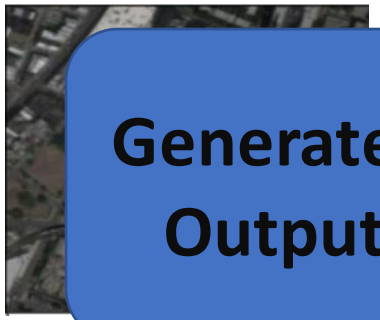
Generated Output

Patch GAN Discriminator

1 X 16 X 16

Unet Generator

Unet Generator



Generated Output

Patch GAN Discriminator

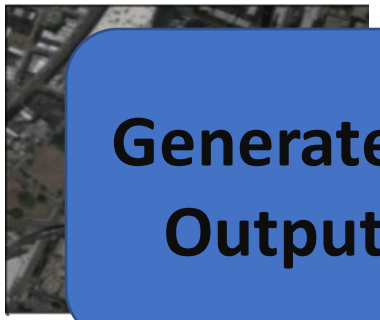
1 X 16 X 16

BCE LOSS & Gradient

Generated Output

Loss 1

Unet Generator



Generated Output

Patch GAN Discriminator

1 X 16 X 16

Target Image

Unet Generator

Generated Output

L1 Loss – Pixel Diff.

Loss 2