

Note about GANs

Ganics

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1 Basic GAN

- one generator and one discriminator
- training on paired data aiming to generate realistic general images

2 CycleGAN

- two generators and two discriminators
- training on unpaired data aiming for image style conversion
- **cycle consistency loss** - an image translated from A to B and then back from B to A should be similar to the original image

3 SRGAN

- one generator and one discriminator
- training aiming to generate high-quality images
- **residual connections** - passing information from previous layers to subsequent layers bypassing intermediate layers

4 PatchGAN Discriminator

- discriminator evaluating images at the patch level
- instead of evaluating the entire image, it evaluates individual image patches
- allows for a more detailed evaluation of images
- often used as part of *SRGANs*