Pix2Pix Discriminator
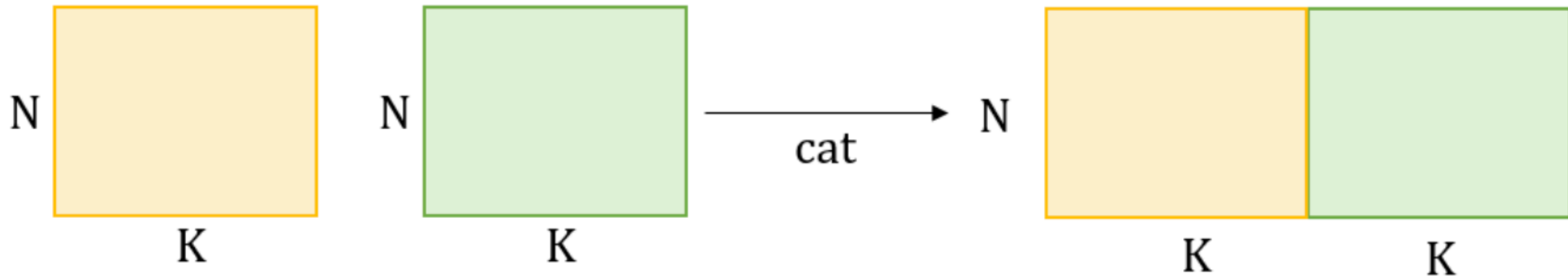
Image-to-Image Translation with Conditional Adversarial Nets

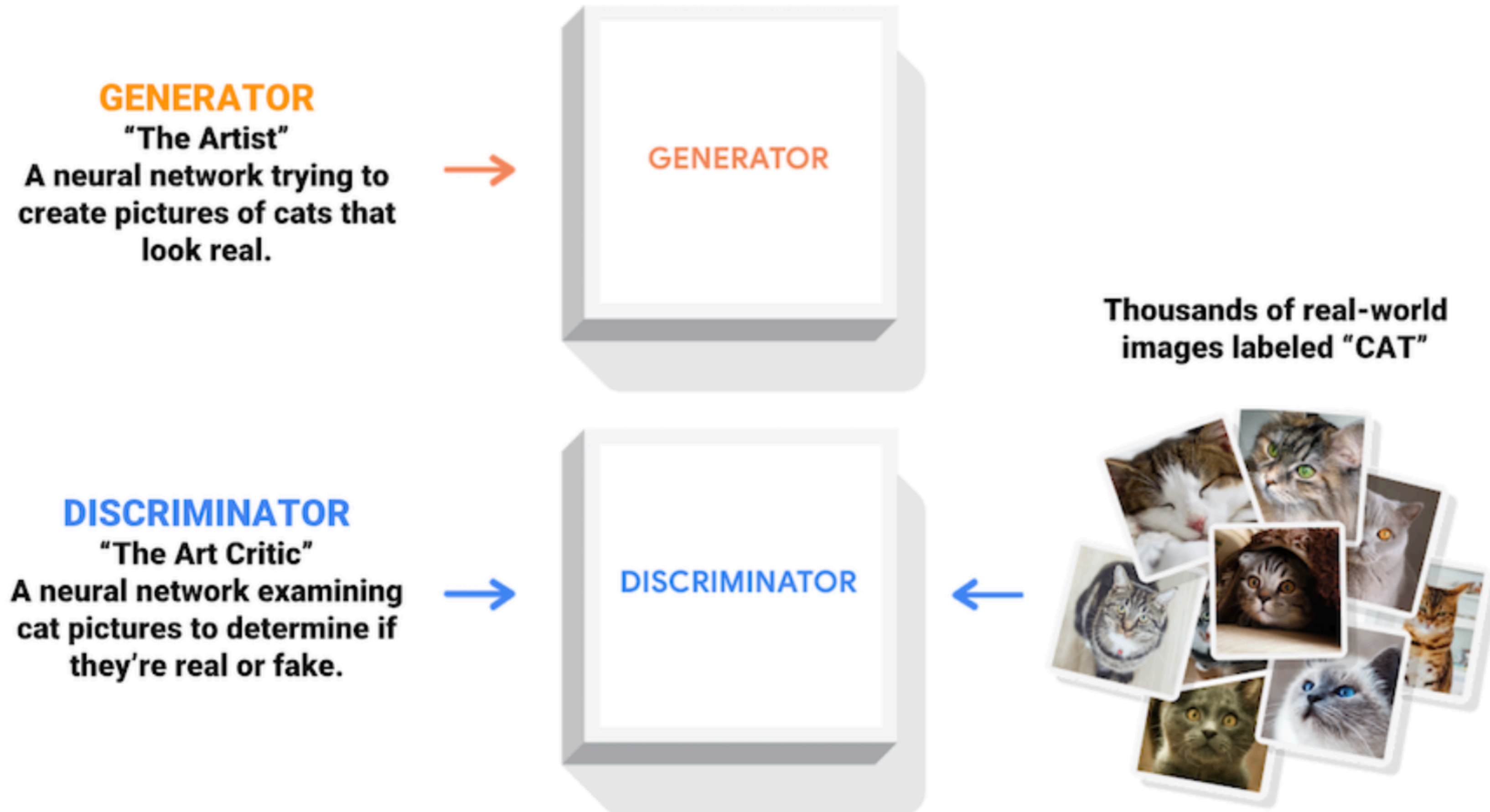Week 4

torch.cat
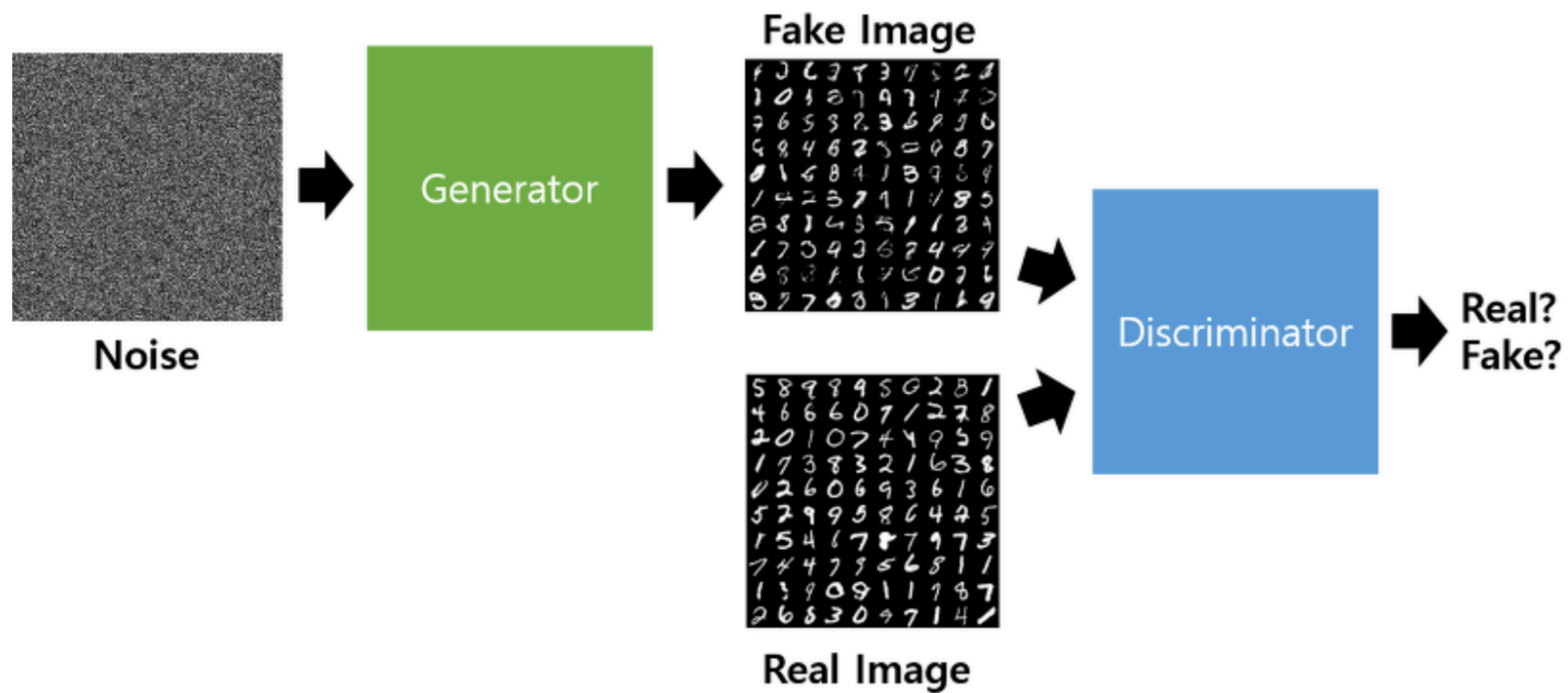## visualize

GAN Discriminator
GAN Overall…

GENERATOR
"The Artist"
A neural network trying to create pictures of cats that look real.

GENERATOR

Thousands of real-world images labeled "CAT"

DISCRIMINATOR
"The Art Critic"
A neural network examining cat pictures to determine if they're real or fake.
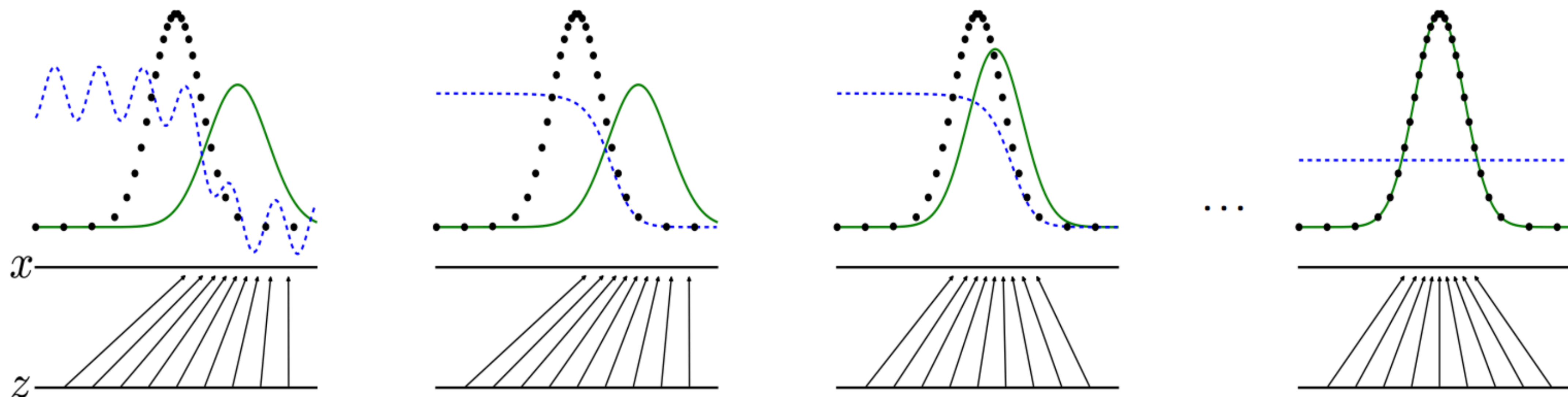
DISCRIMINATOR

Basic GANs
architecture

GAN Discriminator
Distribution Learning

Pix2Pix Generator
Paper's Arcihtecture

6.1.2 Discriminator architectures

The 70×70 **discriminator** architecture is:

```
C64-C128-C256-C512
```

After the last layer, a convolution is applied to map to a 1-dimensional output, followed by a Sigmoid function. As an exception to the above notation, BatchNorm is not applied to the first `C64` layer. All ReLUs are leaky, with slope 0.2.

Pix2Pix Discriminator
PatchGAN

- Restrict only to the structure in local image patches

  - Only penalizes structure at the scale of patches

  - Run the Discriminator "convolutionally" across the Image, averaging all responses to provide the ultimate output of the Discriminator