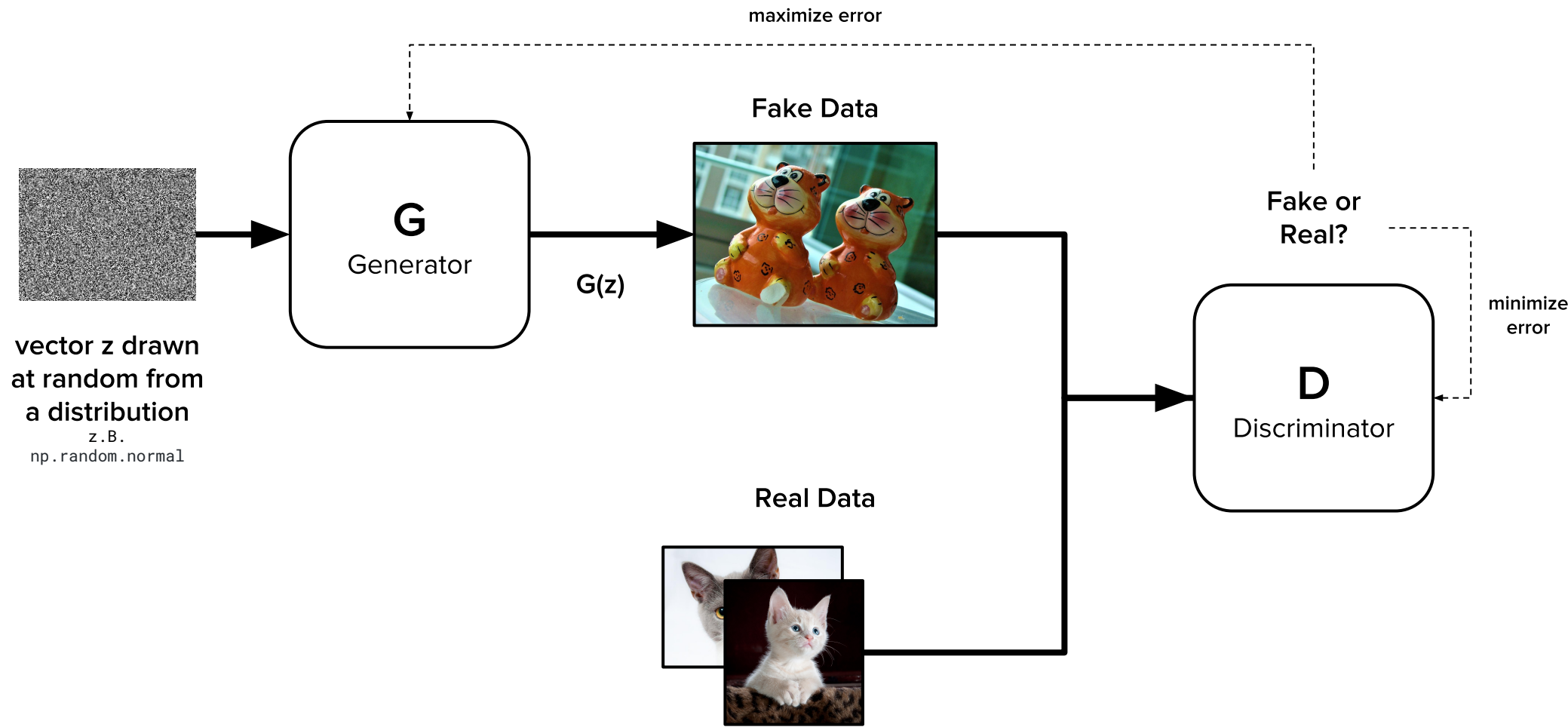


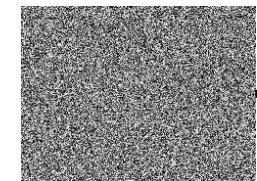
Generative Adversarial Networks



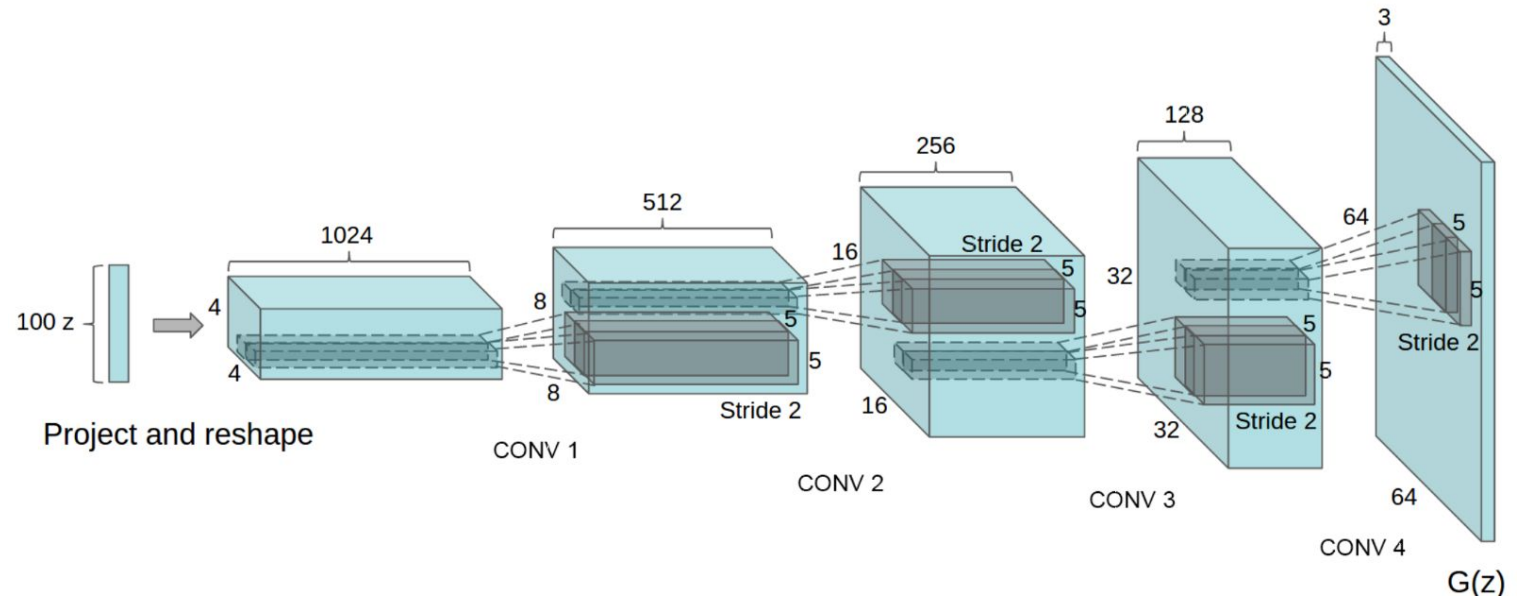
zero-sum game

Generator network

```
model.add(Dense(128 * 7 * 7, activation="relu", input_dim=self.latent_dim))
model.add(Reshape((7, 7, 128)))
model.add(UpSampling2D())
model.add(Conv2D(128, kernel_size=3, padding="same"))
...
```

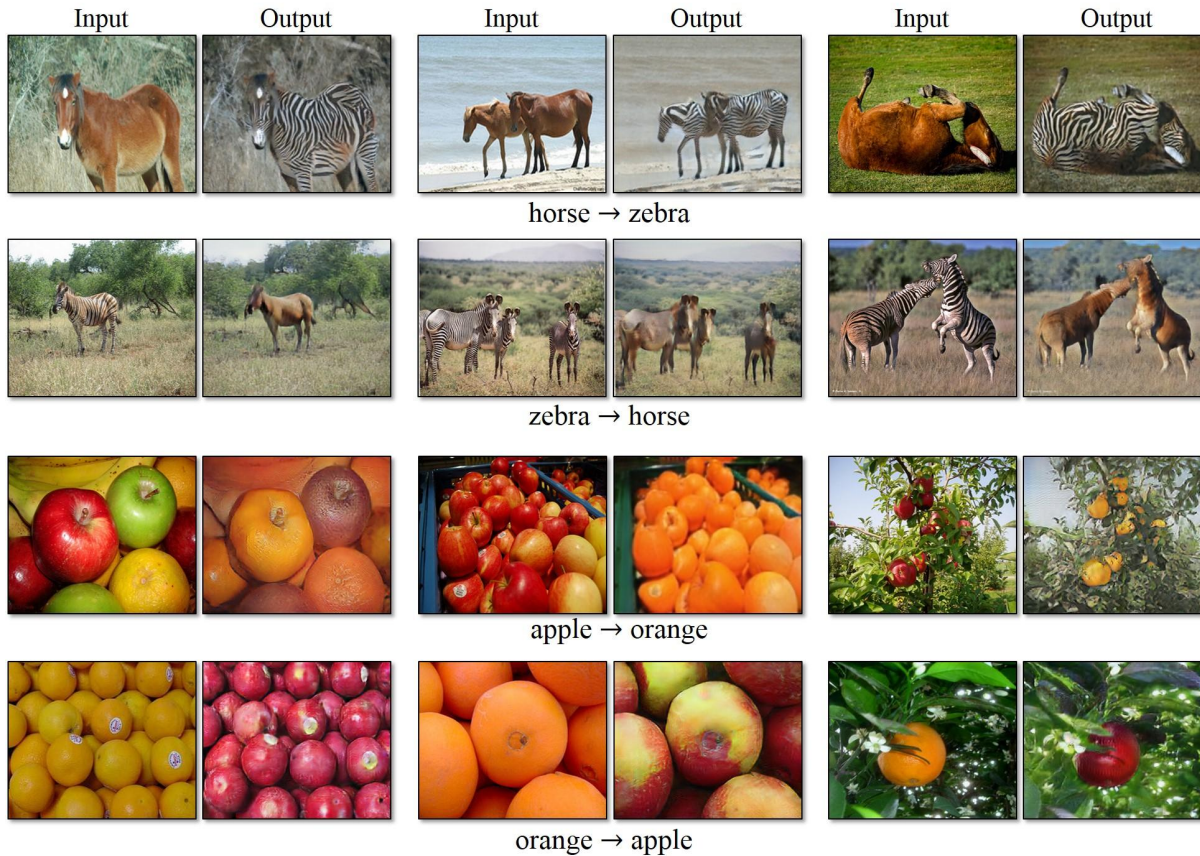


vector z drawn
at random from
a distribution
z.B.
`np.random.normal`



CycleGAN I

Image to Image Translation: Zebra to Horse, Horse to Zebra

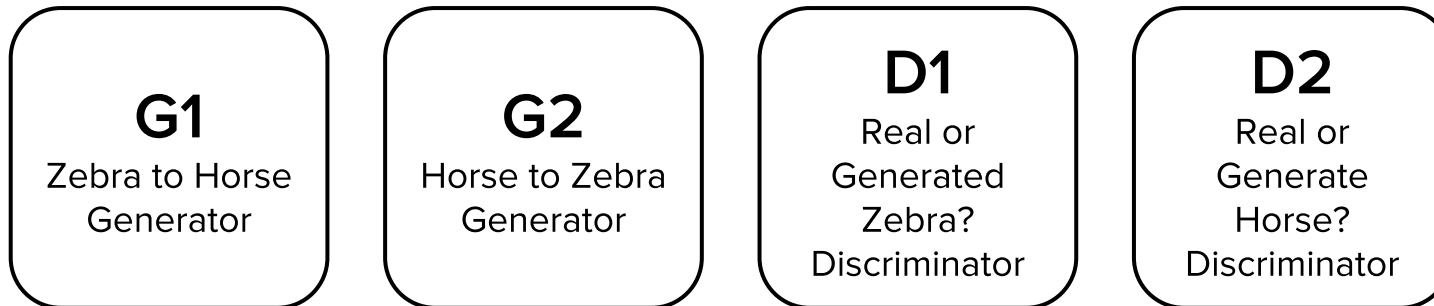


No pairings for training required!

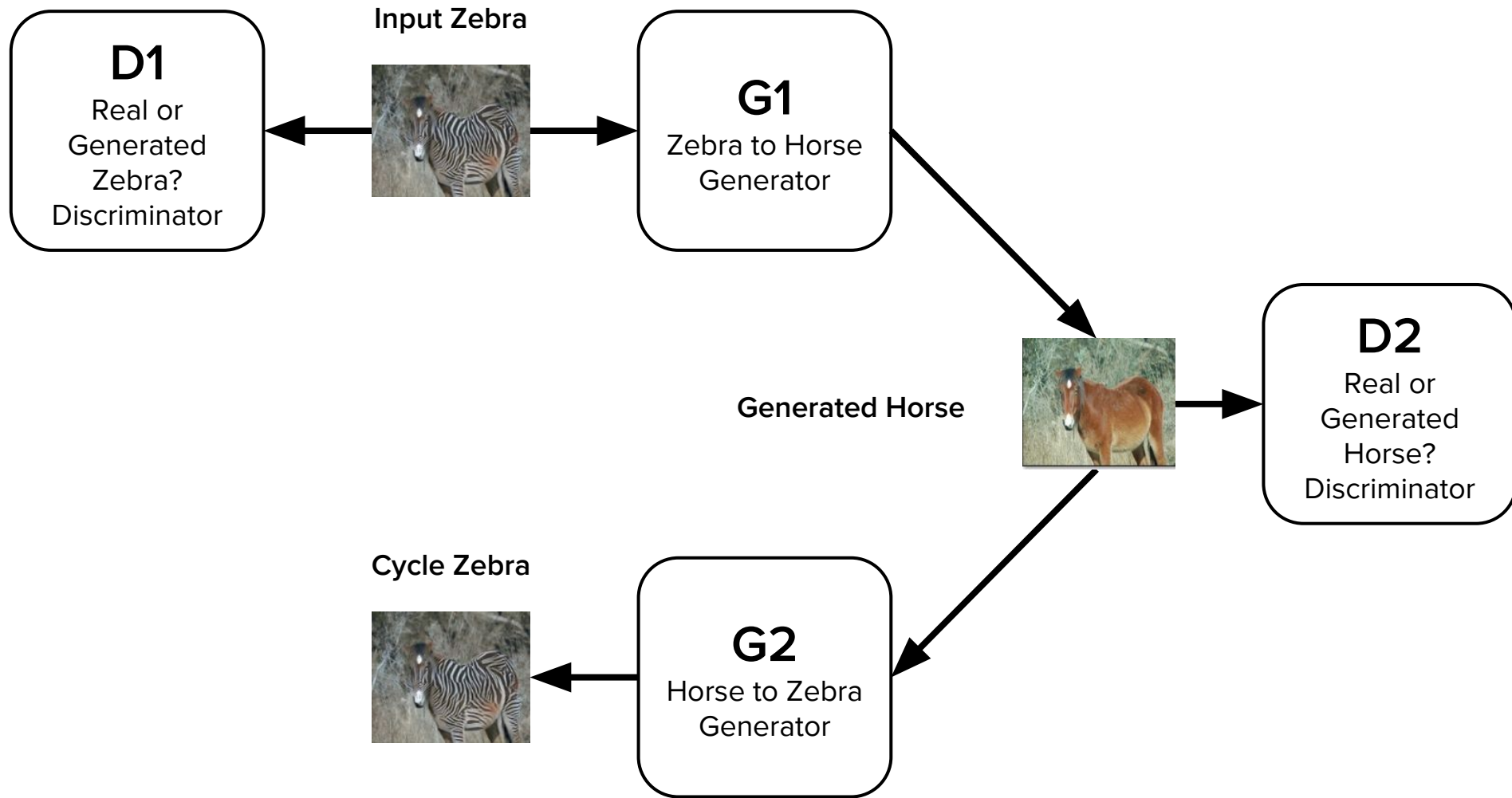


CycleGAN II

4 Networks, how to
combine and train them?



CycleGAN III



Same spiel for Horse to Zebra