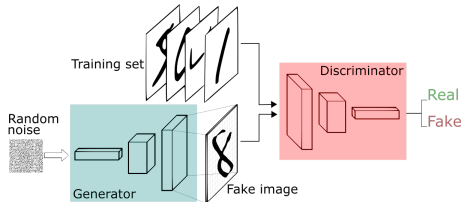# Generative Adversarial Nets

Generative Adversarial Nets are deep generative models that has two neural network that compete with each other.

Generator $\longrightarrow$ takes data from random source as inputs and generates new data.

Discriminator $\longrightarrow$ takes data from original training data set and fake data generated from generator and tells us the source of data.

After successfully training GAN, generator outputs samples that the discriminator cannot differentiate them from real data. Then discriminator outputs 0.5 since the probability to say it is from original data set or fake is 50 percent. .