# Generative Adversarial Networks

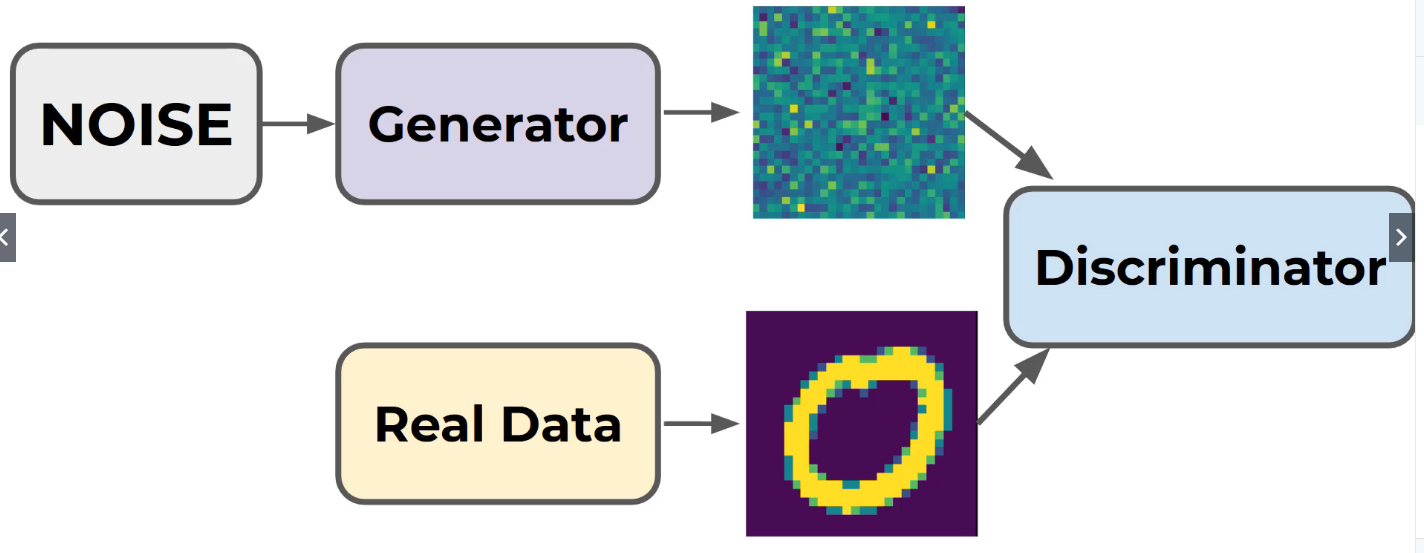
## What are generators?

It is known as the counterfeiter. It outputs data. The goal is to create images that fool the discriminator.

## What is the discriminator?

Tries to classify real and fake images. Which is a binary classification.

## How does it work?



Images from the generator are made, which is basically noise.

This trains the generator to fool the discriminator.

## How many phases are there in the training, and what do they do?

2 phases. (I don’t really understand this)

Phase 1 -

## Does the generator ever see the real images?

No.

## What are the difficulties with GANs?

* Training resources
* Mode collapse
* Instability

## What is Mode Collapse?

The generator figures out one answer for the discriminator and keeps using that to fool the discriminator.

## How to solve Mode Collapse?

Use Deep Convolutional GANs or punish similar batch of images.

## How to fix instability?

Experiment with hyperparameters.