**2017- Photo-realistic single image super-resolution using a generative adversarial network**

Problem: -how do we recover the finer texture details when we super-resolve at large upscaling factors?

In this paper, we present SRGAN, a generative adversarial network (GAN) for image super-

resolution (SR).

Till that date, it was the first framework capable of inferring photo-realistic natural images for 4× upscaling factors. To achieve this, they propose a perceptual loss function which consists of an adversarial loss and a content loss.

Our deep residual network is able to recover photo-realistic textures from heavily downsampled images on public benchmarks.

The MOS scores obtained with SRGAN are closer to those of the original high-resolution images than to those obtained with any state-of-the-art method.

Conclusion: - a deep residual network SRRes-Net which produces the best results on previous public data sets (PSNR method used).

Using extensive MOS testing, they have confirmed that SRGAN reconstructions for large upscaling factors (4×) are more photo realistic.