CV Super Resolution using SRGAN

Model Details

- This model is trained to create high-resolution images from low-resolution images.
- Model Architecture of Generator and Discriminator is referred from the original SRGAN research paper.
- Key Concept: Super-resolution Generative Adversarial Networks.
- Reference: https://arxiv.org/abs/1406.2661

Training

- The discriminator is trained to distinguish between real high-resolution (HR) images and those generated by the generator.
- The generator is trained to minimize adversarial loss, striving to produce realistic HR images.
- For each epoch generator and discriminator are updated once.

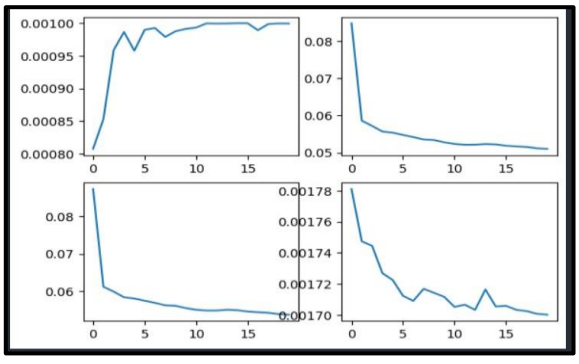
Intended Use

- It is intended to be used for creating high-resolution images.
- It has a variety of applications in clinical, military, space, surveillance, media, and automotive industries.

Metrics

- Adversarial Loss: 0.0010
- VGG Loss: 0.0014
- Pixel Loss: 0.0625
- Optimizer: Adam
- Beta Values for Optimizer: beta 1= 0.9., beta 2: 0.99

Quantitative Analysis



For 20 Epochs:

- 1st Graph: Adversarial Loss vs Epochs
- 2nd Graph: Pixel Loss vs Epochs
- 3rd Graph: Generator Error
- 4th Graph: VGG Loss

Results