

Super Resolution for Media & Entertainment

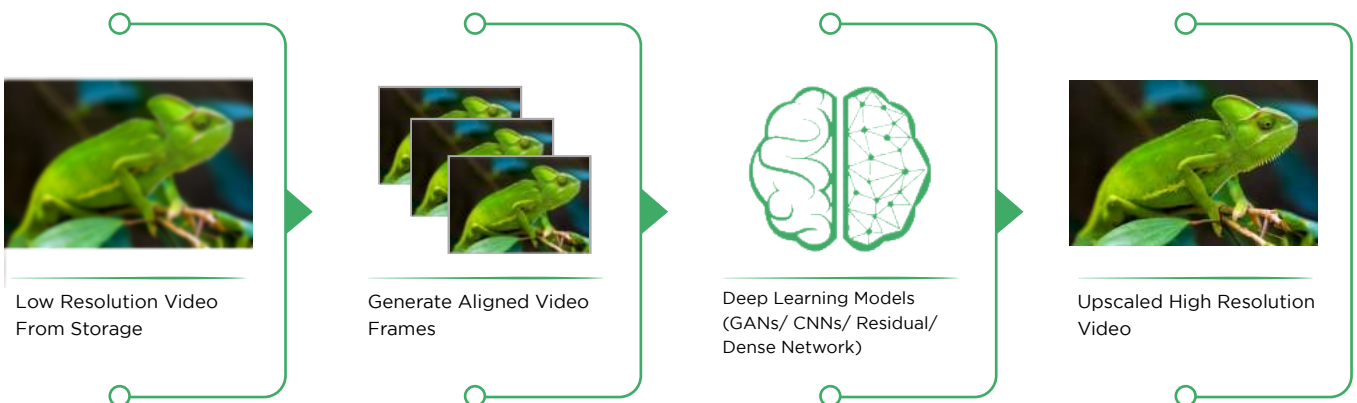
Leverage Generative Artificial Intelligence to upscale low-resolution images & videos

Super-resolution is a content enhancement service to upscale low-resolution video/images to a higher resolution. With the boom in HD devices and high-quality content being delivered by leading OTT players, the resolution requirements of content are going up. This leaves many old TV Shows, documentaries, and movies that need to be remastered to live up to today's standards.

Technology

The algorithm **intelligently** combines non-redundant information from **multiple related low-resolution images** to create a high-resolution image.

Video content is the best example of continuous images (video frames) with non-redundant information. By **'intelligently'**, we mean that the algorithm understands the content which it is upscaling.



Performance*

Execution time for 4x upscaling
(Video length: 1:40 seconds)

- ▶ 144px to HD - 8 minutes
- ▶ 360px to Q HD - 12 minutes
- ▶ 480px to Q HD+ - 18 minutes
- ▶ 720px to 5K - 42 minutes



Business Impact

- ▶ Fast cost-effective content enhancement
- ▶ Monetize old content
- ▶ Distribution readiness for OTT

Takeaways

- ▶ Remastering old content(4K UHD)to match current audience preference is a significant business opportunity for the Media & Entertainment Industry.
- ▶ Super Resolution also overcomes technical limitations in imaging devices & camera systems. For example - optical distortion & motion blur.
- ▶ Old movies, TV Shows, nature documentaries have inherent upscaling requirements. Super Resolution is effective for content owners with a specific content type - anime/sports. Other applications include health care & surveillance.

*These numbers are indicative. The actual model performance could vary with training data & content type