

## Analysis of SRGAN to Upscaling CCTV Image

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### Abstract

Detailed information from high-resolution images is needed when analyzing the content contained in the image. However, sometimes the image has a low resolution so that the image is difficult to interpret. Based on these problems, a research was carried out on improving the quality of image resolution especially in forensic field. CCTV video results that have low-quality images and degraded with many noises, bad illumination, distortions, and blurs. So, we can remove that using *Super-Resolution (SR)* method. This can help during to identification, image interpretation, and analysis process clearly. Using Super-Resolution methods, a high-resolution image is obtained from a set of low-resolution images. The research was conducted based on the Super-Resolution *Generative Adversarial Network (SRGAN)*. SRGAN is a generative model method that can generate data (images) with good quality. From the experiments that have been carried out, the system that has been built is proven to be able to produce images with good quality with the highest PSNR value is 24,873 and the highest SSIM value is 0.831.

**Keywords:** *CCTV, Super-Resolution, Generative Adversarial Network, PSNR, SSIM.*

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