

Abstract

Image enhancement aims to add quality to degraded images, such as blur images and noise images or commonly referred to as noise. In the image itself, degradation can occur such as blur and noise. Image degradation occurs when there is relative motion between objects or lighting on the camera. It introduces and implements computational methods used in image processing to restore images or improve quality based on thresholds. Many applications aim to improve the brightness, contrast, and reduce the noise value of images in real time. In this research, we propose an Autoencoder method for image enhancement in degraded images and use the peak signal-to-noise ratio (PSNR) as a benchmark between the original image and the reconstructed image. The results of the research obtained with the autoencoder method on the image produced poor image quality with an average PSNR value of 25 dB For that, the method needs to do a lot of data training, hyperparameter tuning, and model validation before making autoencoder model.

Keywords: autoencoder, image enhancement, noise, Peak Signal-to-Noise Ratio (PSNR)