

Super Resolution Image using GAN

Saloni Sunil Kelgane¹, Anisha Bankat Umap², Shweta Sushil Thakur³,

Gaurav Rajendra Paralkar⁴, Mrs. P. Y. Pawar⁵

Students, Department of Information Technology^{1,2,3,4}

Guide, Department of Information Technology⁵

Sinhgad Academy of Engineering, Pune, Maharashtra, India

Savitribai Phule Pune University Maharashtra, Pune, Maharashtra, India

Abstract: *One of the most important vision applications is the reconstruction of high resolution (HR) images from a single low-resolution (LR) image. Despite the fact that several algorithms have been successfully proposed in recent years, efficient and robust image super resolution (ISR) reconstruction remains a challenge due to a number of factors, including the inherent ambiguous mapping between the HR and LR images, the need for exemplar images, and computational load. The single image super resolution algorithm is presented in this research, and it primarily focuses on generating a high quality and high-resolution image from a low resolution, low quality image. It can be used for medical imaging, satellite imaging, surveillance, crime investigation, and video applications, among other things.*

Keywords: Super Resolution, Image Reconstruction, Resolution enhancement

REFERENCES

- [1]. Priyanka and Rishabh Shukla , “Image Restoration of Image with Gaussian Filter” , International Research Journal of Engineering and Technology 2020
- [2]. Tamilselvi. K and T. Thenmozhi, “Restoration Techniques Available for Satellite Image Sensing Applications – A Review ” , International Research Journal of Engineering and Technology, 2020
- [3]. Madhuri VM, Samyama Gunjal GH, Savitha Kamalapurkar , “Image Restoration using Adaptive Median Filtering”, International Research Journal of Engineering and Technology, 2019
- [4]. Mauro Castelli and Fabiana Martins Clemente, “A Review on Various Restoration Techniques in Digital Image Processing” , International Research Journal of Engineering and Technology, 2018
- [5]. Basavaprasad B , Ravi M , “A Study On The Importance Of Image Processing And Its Applications” , International Journal of Research in Engineering and Technology , 2014
- [6]. Shivani Dere, Anurag Chaudhari, Adarsh Laddha, Yashaswini Deora, Dhanalekshmi Yedurkar , “Digital Image Colorization, Style Transfer and Image Inpainting using Deep Learning“ , International Research Journal of Engineering and Technology (IRJET) 2021
- [7]. <https://www.analyticsvidhya.com/blog/2021/05/deep-learning-for-image-super-resolution/>
- [8]. https://developers.google.com/machine-learning/gan/gan_structure
- [9]. <https://arxiv.org/abs/1609.04802v5>
- [10]. <https://www.youtube.com/watch?v=KULkSwLk62I>