# Depth Sensing Imaging System Autonomous Restored Fog

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**Abstract***: Edge-preserving smoothing is an image processing technique that smooths away textures while retaining sharp edges. Image de-noising is the technique to reduce noises from corrupted images. The aim of the image denoising is to improve the contrast of the image or perception of information in images for human viewers or to provide better output for other automated image processing techniques. Outdoor images taken in hazy climate often get degraded due to the effect of haze. There are several methods to remove haze from hazy images. Most of them over saturates the dehazed images. This degrades the quality of images. The color attenuation prior technique is one of the best algorithm to remove haze from images. Based on this technique and by making use of MATLAB software, this paper suggests a simple method to remove haze from Images. The core of DSIS lies in its fusion of depth information with traditional imaging data. By leveraging depth maps obtained from sensors such as LiDAR or structured light cameras, DSIS accurately delineates objects in the scene and their respective depths. This enables selective fog removal, prioritizing objects closer to the camera for clearer representation while preserving depth cues for improved scene understanding. Our project aims to implement and evaluate DSIS in real-world scenarios, such as outdoor surveillance and automotive vision systems. Through comprehensive testing and performance analysis, we seek to demonstrate the effectiveness of DSIS in restoring visibility under varying fog densities and lighting conditions. Additionally, we will explore optimization techniques to enhance DSIS's computational efficiency, ensuring its practical feasibility for deployment in resource-constrained environments.*

**Keywords:** Deep Learning, delection fog,Python3.9.x,vs code, Pycharm

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