**TITLE OF THE PROJECT** **:** AN EFFICIENT IMAGE RESTORATION METHOD WITH TEMPORAL INFORMATION FOR A CORRUPTED IMAGE IN A NOISY ENVIRONMENT

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**ABSTRACT**

The long-standing low-level vision issue in deep learning is the process of image restoration. Deep learning algorithms are used to improve image quality by discretizing corrupted photos from high-quality photos. During the image capture process, the image becomes corrupted due to the presence of haze, motion blur, and lens blur, resulting in low quality images with noise. Photographing in less-than-ideal conditions necessitates post-processing, such as JPEG image corruption occurs as a result of compression. The blurred images are restored along with the temporal relationship in video frames due to the presence of noisy, compressed, and downscaled images. In existing the use of variational autoencoders results in low quality images in noisy condition. The proposed VRT (Video Restoration Transformer)used for video restoration (e.g., video super-resolution) seeks to recover high-quality frames from low-quality frames. Video restoration, as compared to single image restoration, typically requires the use of temporal information from multiple adjacent but usually misaligned video frames. The Video Restoration Transformer (VRT) in this case is capable of parallel frame prediction as well as long-range temporal dependency modelling.