

A SPATIAL DOMAIN IMAGE SUPERRESOLUTION APPROACH FOR SOYBEAN LEAF DISEASED IMAGE

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ABSTRACT

Super-resolution means finding a real truth from the image which aims to produce a high-resolution image from a set alone or more low-resolution images by recovering or inventing plausible high-frequency image content. Typical approach is try to reconstruct a high-resolution image using the sub-pixel displacements of several low-resolution images, usually regularized by a generic smoothness prior over the high-resolution image space. Throughout this paper, a higher resolution image is defined as an image with more resolving power.

Super Resolution consists of two main steps: image registration and image reconstruction. Precise alignment of the input images is one of the important terms. In this paper, we have implemented and tested motion estimation algorithms and image reconstruction algorithms in spatial domain as well as in frequency domain in order to study their analytical parameters and a high resolution image is created by using bicubic interpolation over the prealiased images. Also testing results of this paper on soybean leaf diseased images are successful in spatial domain as per the application of image superresolution.

KEYWORDS: Superresolution, Image Registration, Image Reconstruction