

SUMMARY

In the conference ICC MST 2020, two research papers entitled "A NOVEL SCHEME FOR DENOISING OF RGB IMAGES USING GENETIC ALGORITHM" and "HYBRID AND BLIND WATERMARKING APPROACH FOR THE SECURITY OF DIGITAL IMAGES IN RIDGELET DOMAIN" were published in Scopus indexed journal "Journal of Critical Reviews" authored by Dr. Amit Jain, Assistant Prof. Department of CSE, GNDEC and Dr. Manpreet Singh, Assistant Prof. Department of I.T., GNDEC.

The first paper presented a new technique for image deblurring with the application of optimization algorithm called genetic algorithm. The work uses GA to refine the Kernel function used for deblurring of Image. The kernel for blurred image is computed first by using Laplacian of Gaussian (LoG) filtering and then applying morphological operations to extract the PSF. The PSF or kernel function thus computed is then used to compute Mean Squared Error when applied to deblur the image. The resultant MSE is utilized as objective function and is minimized by adjusting the parameters for LoG filter and blurring filters in terms of chromosomes in Genetic Algorithm. After successful iterations, the MSE is minimized and best fit kernel function used to deblur the image.

In the second paper, hybrid and visually impaired watermarking plan was proposed for the assurance of copyright of computerized pictures. The plan dependent on hybridization of two development changes with the end goal that Ridgelet change and strong rule part examination (RPCA) are utilized in which edge let coefficients are utilized installing process in the wake of going them through SVD deterioration. The inspiration driving utilizing these two strategy's blend is to improve the indistinctness of the watermarking plan. The security of the proposed plot is accomplished by applying Arnold scrambling to watermark picture before implanting. SVD is applied to both mixed watermark and Ridgelet high recurrence coefficients. Examinations of the proposed plot are led on different sorts of common pictures. Examinations results showed that, contrasted and existing plans, the proposed conspire is hearty to different assaults while having high intangibility. Additionally, the proposed plot is performed superior to many existing plans.

Both of the research papers includes the implementation of advanced concepts offered in the subjects like Image Processing, Soft Computing, Machine Learning etc. The students study these subjects in the courses of B.Tech. and M.Tech. The publishing of papers in these fields help the teachers to update their knowledge as per the advancement in the technology. This will also help us to guide the students effectively in their project or thesis.



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