5. CONCLUSION

We proposed a novel technique for brain image classification. The initial pre-processing section applies median filtering techniques for MR brain images. Then it undergoes segmentation using morphological segmentation technique where tumor affected regions are segmented ideally. Then the feature extraction is done by using dual-tree complex wavelet transform (DTCWT). Finally, the classification is performed through kernel SVM, which has three different kernels as Gaussian Radial Basis (GRB) kernels, Homogeneous Polynomial (HPOL), and Inhomogeneous Polynomial (IPOL). GRB achieves 99.42% accuracy among these kernels, and the rest of HOPL and IPOL has 96.7% and 98.05, respectively. The proposed method is compared with other existing classification approaches to prove its performance, showing higher accuracy.

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