

A Novel Approach with Improvised Machine Learning Algorithms Using Optimal Feature Extraction and Image Matching on Medical and Multi Sensor Images

In this proposal, the proposed segmentation technique is performed on MR brain images that are segmented as gray matter, tumor-infected tissues, white matter, and cerebrospinal fluid. Before classification, a pre-processing technique is employed to improve the PSNR and to remove the result of undesirable noise. The local texture data of a pixel is achieved through a fuzzy texture unit (FTU) and universal texture data is achieved through the fuzzy texture spectrum (FTS). This study intends to present the utility of FTS for Texture Segmentation. Moreover, to enhance the quality rate and accurateness of the proposed Approach, appropriate characteristics are considered from every clustered tissue. The investigational outcomes of different images above are evidence that the investigation for the brain tumor finding is accurate as well related to manual finding done by clinical experts or radiologists. The performance metrics likewise show that this study gives better outcomes by improving certain parameters like PSNR, specificity, accuracy, sensitivity, and MSE. This algorithm accomplished 97.02% accuracy which shows the viability of the proposed approach for recognizing ordinary and typical tissues from MR pictures. Therefore, this proposal is capable of detecting brain tumors for MR images. It has to be noted that this algorithm also suits good for primary investigation and it helps for the better diagnosis by clinical experts.