

An Efficient Technique to Segment the Tumor and Abnormality Detection in the Brain MRI Images Using KNN Classifier

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Abstract

In the analysis of brain Magnetic Resonance Images (MRI), classification of normality and abnormality is an important issue. Many works have been done to classify the brain MR images. This work presents a new technique to classify the brain MRI images by using segmentation and KNN classifier. Initially, the brain MRI images obtained from brain databases are preprocessed using the Gaussian filter and the pre-processed images are normalized. Subsequently, the normalized images are subjected to segmentation by employing texture and intensity oriented region growing technique (TIORGW). Then texture features are extracted from the segmented brain MRI images. Later that, the well-known optimization algorithm called Genetic Algorithm (GA) is utilized to select the optimal texture features. Following that, the optimal features are passed in to KNN in order to classify whether the brain MRI image is normal or not. The proposed technique is implemented in the working platform of MATLAB and the performance is analysed by utilizing more number of brain MRI images.

Biography

Muhammad Sultan Irshad has completed his/her master's degree at the age of 25 years from COMSATS University Islamabad, Pakistan. He is the PhD scholar under highly motivated and worth taking issue regarding water scarcity project at well renowned school in china" School of Material Science and Engineering at Hubei University, China. He has over 3 publications. In this project, my group has been emerged as a strong candidate to sort out this issue using photothermal conversion of carbon-based material for solar driven evaporation to yield fresh water and energy storage applications.

In the last, I am highly motivated young researcher and devote myself to explore the new wonders in this field because its appealing me to do something for humanity. I want to participate in this conference, I have attended many conferences in Pakistan, but it would be my first international conference in European countries if I get some financial support. I am thinking positive and motivated for your valuable feedback.



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