Abstract

The efficacy of the medical image analysis with the level-set shape along with fractal texture and intensity features to discriminate PF (Posteriorfossa) tumor from other tissues in the brain image. Further, extracted features may not be adequate to differentiate amongst the medical images. To enhance the medical image processing, to devise an automotive subjective optimality model for segmentation of images based on different sets of selected features from the unsupervised learning model of extracted features. After segmentation, it is necessary to classify the image based on different classes it belongs to. To classify a medical image, a multiple classifier framework and classify the image based on the classes like normal body cells, infected cells, and highly infected cells. The classifier is designed based on the mutual information coefficient of the selected features underwent for image segmentation procedures. The classification is done with set of rotation invariant features being selected on the lines of subjective-optimality and different classifiers are organized using different features sets trained in different data. An experimental performance is evaluated with benchmark data sets extracted from research repositories of both real and synthetic data sets. The performance parameter used for the analysis of the proposed multi-classifier framework using mutual concept criterion [MFMCC] for medical image analysis are Multiple Class intensity, Mutual information coefficient of rich features and efficiency.
Multi-Classifier Framework for Medical Image Analysis using Mutual Information Criterion

References

- H. P. Ng et. Al., "Medical Image Segmentation using K-means Clustering and Improved Watershed Algorithm", IEEE Southwest Symposium on Image Analysis and Interpretation, 2006

Index Terms

Computer Science

Pattern Recognition
Keywords

Mutual information  Feature selection  Medical image analysis  Feature extraction
Scale Invariant Feature Extraction