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ABSTRACT

The size of digital images has expanded substantially in recent years, owing to the fact that a wide range of equipment creates terabytes of images. There is enormous amount of data available. However, we cannot access or use data that is not controlled. So the major challenge, which is more critical, arises from human perception's subjectivity and images rich content.so address above issue CBIR technique proposed. In this research problem statement is based around image mining techniques. The main issue in image mining technique is CBIR that performs the retrieval under the similarity term accompanied by the extracted features. Most of the researches haven't given much attention to retrieval time as it deserves. Henceforth the complexity of retrieval algorithm depends upon the retrieval time.

In this thesis we have proposed Improved Deep Belief Neural Network (IMDBN) technique is used to classify the content based image. The proposed system carries several steps like pre-processing, feature extraction, classification, and feature matching are employed. Initially, the median filter method is used to pre-process the raw data. Mainly this method is used for removing noise from the image and getting improved image. In the second step, feature extraction the Color Shape Texture (CST) method is used to extract relevant feature set. The term color space denotes the representation of a set of colors and can be generated from RGB color information. To retrieve the data, the extracted features are fused and stored in a feature vector, then subjected to the suggested IMDBN classification processes. At last step, feature matching used the Manhattan Distance to evaluate the score value and compared feature values of both database images and query images. It's known as the Manhattan distance. This method gives 94% accuracy, it has compared to another existing methods the proposed method is more reliable and provides more similar image to the query image .Which is highly satisfactory and better than existing approach.

In the other method we performed the empirical evaluation with public dataset including 1000 images divided into 15 classes. Convolutional Neural Network (CNN) is used to apply for designing high-quality RGB images retrieval. Although these strategies improved classification performance, the deep learning algorithms' learning process is more sophisticated than that of traditional classifiers. In the proposed methodology transfers some steps like pre-processing, Data Augmentation, classification, are determined. At first, the approach of using median filter is used to pre-process the raw data. Mostly, this approach is used for removing noise from the image and getting increased image. In the second step, to extend training images, the three-fold geometric Data Augmentation approach is used. Here, three methods were used to augment the training data the techniques are rotating, scaling, flipping. In the training phase, CNN's performance is improved by utilizing metaheuristic optimization for weight optimization. Finally, the CNN is used to predicted the images by associating the before trained image to query image. The CNN model is utilized to address the image retrieval issue, and it is back propagated to optimize the mistakes caused to locate the weights, using a technique known as Golden Eagle Optimization (GEO). This proposed method IRB_CNN gives 98% accuracy.

Next discusses the results and Algorithmic analysis which mainly focuses on ORB-NULBP approach to retrieve medical images. The main goal is to find out relevant images in the database on an query image .The feature vector from the brain images are extracted using NU-LBP feature descriptor, and brain classes are classified using an entropy-based RF classification algorithm such as Glioma, Meningioma, and pituitary tumour. The proposed model gives 98% accuracy which is more effective outcome as compared to other methods. Furthermore, better retrieval procedure, the retrieval outcome of class imbalance is improved.

Other objective of my work is, two distinct optimization techniques are employed to determine the FCM's centroid: a crow search optimization strategy and a chimp optimization technique. The proposed approach comprises several phases, including feature extraction and similarity classification. OCSO is initially used for classification and image retrieval. The proposed method OCSO gives 91% precision which is more effective outcome as compared to other methods and another ChoA give 95% precision which is more effective outcome as compared to other methods.