

# AN IMPROVED RETINAL IMAGE RETRIEVAL USING SFSKNN AND REGRESSION TREE

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Abstract-In multimedia medical image database management, the search of image database complex issue. Automatic Image Retrieval (IR) system is the key for efficient utilization of this massive digital resource. Content Based Medical Image Retrieval (CBIR) has a potential for making a strong impact in diagnostics, research and education. Texture feature is an important and most powerful feature used for image retrievals. CBMIR using multiple texture features outperforms well as compared with single features but how to combine these features and feature representation methods is important in image retrieval. Content based image retrieval employs to identify the abnormality in the retinal Images. To achieve this goal, a framework that aggregates and extracts features and classify about the Retinal image.The proposed approach seeks to focus on Retinal Image Retrieval based on Feature Extraction, Optimization of Feature Vectors, Classification of Features, and Similarity Measurements which will help for computer assisted diagnosis. The selected features are Textures such as Gray level Co-occurrence Matrix Features(GLCM) and Gabor filter features, in which extracted features are formed as feature vector database. The Sequential Forward Selection along with K-Nearest Neighbor(KNN) are used to reduce the feature vector dimensionality and classification is performed using the Regression Tree to form groups of relevant image features that provide a natural way to classify dimensionality reduced feature vectors of images. This proposed framework is used to help the physician can gain more confidence in his/her decision for diagnosis of retinal images and the medical students and educational institutions are keen to get the required images effectively for further analysis of their research.

Index Terms-Feature extraction, Featurevector, Gray level Co-occurrence Matrix, Sequential forward selection