A Comparative Study on Clustering Algorithms using Image Data

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Abstract

Analyzing of image called Segmentation. It is an important concept to viewing and analyzing different type’s images and solving a wide range of problems in image. Clustering algorithm and technique for classifying usage image data and the process of analyze image data from dissimilar perception and abbreviation it into valuable information, this information can be use to increase proceeds, cuts costs, or Time complexity. There is different type of algorithms for image data and clustering such as (FCM) fuzzy c-means clustering algorithms, SFCM (Spatial fuzzy c-means clustering), K-Means, and PSOFCM (particle swarm optimization incorporative fuzzy c-means clustering). The selection between the predictive classifier is extremely important. Fuzzy algorithms based on initial cluster selection without noise data. PSOFCM and SFCM approaches shows better segmentation results can be obtained in noise.

PSOFCM and SFCM approaches shows how better image segmentation of results can be obtained. Image clustering and its applications are used in human image i.e. Medical image segmentation used for detection of Brain images, tumor and more. The result obtained through
Particle swarm optimization (PSO), yields better detected image and time complexity compared to FCM and SFCM.

References


Index Terms
Keywords

FCM, Particle swarm optimization based FCM, spatial information based FCM.