

IMAGE COMPRESSION USING CLUSTERING TECHNIQUES

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ABSTRACT

This paper deals mainly with the image compression algorithms. Context-based modeling is an important step in image compression. It is very difficult to define and utilize contexts for natural images effectively. This is primarily due to the huge number of contexts available in natural images. we used optimized clustering algorithms to compress images effectively by making use of a large number of image contexts. The goal of clustering is to separate a finite unlabeled data set into a finite and discrete set of natural, hidden data structures, rather than provide an accurate characterization of unobserved samples generated from the same probability distribution. This theory is used here for compressing images containing large number of similar contexts. There are many clustering algorithms exist like grid based clustering algorithm, density based clustering algorithm, hierarchical algorithm, partitioning algorithm and model based algorithm. Since images contain large number of varying density regions, we used an optimized density based algorithm from a pool.

KEYWORDS: Context Modeling, PPM, Prediction by Partial Approximate Matching (PPAM), Varied Density Based Clustering Applications with Noise (VDBSCAN)