Abstract

After harvesting wheat, the main concern is classifying wheat seeds according to their quality, size, variety and etc. There are different procedures to measure parameters and analyzing wheat seeds but they are time-consuming and error-prone. An automated system is developed being capable to analyze and classify wheat seeds faster with higher confidence level based on defined attributes, the system uses popular K-means clustering algorithm. The base of K-means is established on squared error. Several points are given as inputs to algorithm and then they are assigned to k clusters according to distance to the centroids, each point is included in cluster which centroid is nearest to that point. A wheat dataset taken from UCI Machine Learning Repository is considered by k-means algorithm and results are analyzed. The experimental results on prototype data show the effectiveness of the proposed method.

Index Terms

Computer Science
Applied Sciences
Keywords
Smart systems; clustering; K-means; wheat seed; UCI repository