

# Data Clustering using Ant Clustering Algorithm (ACA)

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## Abstract

*Clustering refers to the grouping of data records, observation or cases into similar objects. A cluster observation or cases similar to one another, and dissimilar to the record in other cluster. Recently, much research has been proposed using nature inspired algorithm to perform complex machine learning task such as clustering. Clustering with swarm-based algorithms is emerging as an alternative to more conventional clustering techniques. Ant colonies have been observed to perform tasks similar to clustering. This observation is the inspiration of ant based clustering algorithm, which simulated the behavior on the data. There are many advantages to ant clustering than conventional clustering algorithm such as K-Means such that ant clustering algorithm can automatically discover number of cluster and they are suitable for large and high dimensional dataset due to their grid based sorting nature. This paper presents the implementation of the ant based clustering algorithm for clustering data on various dataset and provides experimental results.*