

# A SIMULATED ANNEALING ALGORITHM FOR THE CLUSTERING PROBLEM

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## Summary

In this paper we discuss the solution of the clustering problem usually solved by the K-means algorithm. The problem is known to have local minimum solutions which are usually what the K-means algorithm obtains. The simulated annealing approach for solving optimization problems is described and is proposed for solving the clustering problem. The parameters of the algorithm are discussed in detail and it is shown that the algorithm converges to a global solution of the clustering problem. We also find optimal parameters values for a specific class of data sets and give recommendations on the choice of parameters for general data sets. Finally, advantages and disadvantages of the approach are presented.

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