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### **Abstract**

Density-based clustering is one of the most important sciences nowadays. A various number of datasets depend on it. Since homogeneous clustering may generate a large number of smaller useless clusters, a good clustering method should give the permission to a significant density variation. This paper focuses on enhancing the clustering results after using density-based cluster algorithms DBSCAN (Density-based spatial clustering of applications with noise) or OPTICS (Ordering points to identify the clustering structure) by using statistical models. The use of statistical models supports improving results by reducing the number of noise points with the same cluster number and expand the selected area as recognized as cluster.

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### Index Terms

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### Keywords

Density-based, DBSCAN, OPTICS, Statistical, Selection model