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Assessment of variable contribution in model-based clustering through variation partition.

Model-based clustering is a flexible grouping technique based on a mixture of fitted statistical distributions for data groups. In recent years, model-based clustering has grown to be more popular among practitioners with applications that can be found in numerous fields of study. However, there is limited literature devoted to developing diagnostic tools for obtained clustering solution. In this paper, a new method through variation decomposition is proposed for probabilistic assessing the contribution of variables to the partitioning of data groups. Positive and negative correlations between two variable contributions are investigated with developed visualization tool. The method demonstrates promising results on application to real-life datasets. (Received January 25, 2017)