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Clustering in ontology-based exploratory analysis of scientific productivity

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Ontology-based approach in exploratory analysis of textual data can significantly improve the quality of the obtained results. On the other hand, the use of domain knowledge defined in the form of ontologies increases the time needed to prepare a model and makes required calculations more complex. The presentation will discuss selected aspects of cluster analysis performed on documents automatically annotated using ontologies. It seems that methodological aspects of cluster analysis process, especially the way in which distances are determined, should depend on the structure of a given ontology. In the presentation three cases involving the use of ontologies with linear, hierarchical and network structures will be discussed. Also, the problem of clustering with respect to data annotated by two different ontologies will be presented. The issues presented during the presentation will be illustrated by the results of analyses carried out for data in the form of abstracts of scientific articles.

Summary

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