Multi-graph Frequent Approximate Subgraph Mining for Image Clustering

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Abstract

In data mining, frequent approximate subgraph (FAS) mining techniques has taken the full attention of several applications, where some approximations are allowed between graphs for identifying important patterns. In the last four years, the application of FAS mining algorithms over multi-graphs has reported relevant results in different pattern recognition tasks like supervised classification and object identification. However, to the best of our knowledge, there is no reported work where the patterns identified by a FAS mining algorithm over multi-graph collections are used for image clustering. Thus, in this paper, we explore the use of multi-graph FASs for image clustering. Some experiments are performed over image collections for showing that by using multi-graph FASs under the bag of features image approach, the image clustering results reported by using simple-graph FAS can be improved.

Keywords: *Approximate multi-graph matching, Approximate multi-graph mining, Multi-graph clustering.*