Abstract

Data mining is one of the most popular research topics nowadays. It has a lot of applications in many fields such as bioinformatics, social networks, XML processing, web usage mining and computer networks. To the best of our knowledge, taxonomic subtree mining in tree dataset and taxonomic subgraph mining in single graph dataset are problems which have not been studied before. On the contrary, taxonomic subgraph mining for graph transaction dataset has been discussed and presented in many papers in the literature. In general, subtree and subgraph mining algorithms are divided into two types: apriori-based approach algorithms and pattern-growth approach algorithms. Moreover, each frequent subtree and subgraph mining algorithm should include two steps; candidate generation and support counting. Our goal in this paper is to present a summary about the available tree and graph mining algorithms which have been discussed in the literature, also, to propose a taxonomic superimposed tree and graph mining algorithms inspired by the taxonomy-superimposed graph mining concepts. The proposals that we present in this paper can be used for mining biological tree and graph
datasets to find frequent subtree and subgraph patterns.

References

Index Terms

Computer Science  Pattern Recognition

Keywords

Datamining, Taxonomy, Subtree Mining, Subgraph Mining, Frequent Patterns.