Abstract

Graph sampling provides an efficient way by selecting a representative subset of the original graph thus making the graph scale small for improved computations. Random walk graph sampling has been considered as a fundamental tool to collect uniform node samples from a large graph. In this paper, a comprehensive analysis and comparison of four existing sampling algorithms- BFS, NBRW-rw, MHRW and MHDA is presented. The comparison is shown on the basis of the performance of each algorithm on different kinds of datasets. Here, the considered parameters are node-degree distribution and clustering coefficient which effect the performance of an algorithm in generating unbiased samples. The sampling methods as in this study are analysed on the real-network datasets and finally the conclusion says that MHDA performs excellently whereas BFS gives a poor performance.

References

1. D. Corlette and F. Shipman, “Capturing On-line Social Network Link Dynamics using


Index Terms

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Comparison of Sampling Algorithms, Node Degree Distribution, Clustering Coefficient