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 affect 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
Performance Analysis and Comparison of Sampling Algorithms in Online Social Network


Index Terms

Computer Science          Algorithms
Keywords

Comparison of Sampling Algorithms, Node Degree Distribution, Clustering Coefficient