

عنوان مقاله:

Node Classification in Social Network by y Distributed Learning Automata

محل انتشار:

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خلاصه مقاله:

This paper presented a multiple Distributed Learning Automata (DLA) random walk model for node classification on a social network task. The purpose of this work is to improve the accuracy of node classification in social network by using of DLA. When dealing with large graphs, such as those that arise within the context of online social networks, a subset of nodes may be labeled. These labels can indicate demographic values, interest, beliefs or other characteristics of the nodes. A core problem is to use this information to extend the labeling so that all nodes are assigned a label. Due to the high accuracy of local similarity measures, in the proposed algorithms, we will use them to build the transition matrix. As a standard in social network analysis, we also consider these networks as graphs in which the nodes are connected by edges and the transition matrix is used as weight value of edges. Now we partition this graph according to labeled nodes. Every sub-graph contains one labeled node along with the rest of unlabeled nodes. Then corresponding DLA on each partition. In each sub-graph we find the maximal spanning tree by using of DLA. Finally, we assign label by looking at rewards of learning automata. We have tested this algorithm on three real social network data sets. The result of Experiments show that the expected accuracy of a presented algorithm is achieved.

کلمات کلیدی:

Social Network, Classification, Distributed Learning Automata, Node Labeling, Local Similarity Measure

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