World Academy of Science, Engineering and Technology
International Journal of Social and Business Sciences
Vol:16, No:06, 2022

Influence Maximization in Dynamic Social Networks and Graphs

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Abstract : Social influence and influence diffusion have been studied in social networks. However, most existing tasks on this subject focus on static networks. In this paper, the problem of maximizing influence diffusion in dynamic social networks, i.e., the case of networks that change over time, is studied. The DM algorithm is an extension of the MATI algorithm and solves the influence maximization (IM) problem in dynamic networks and is proposed under the linear threshold (LT) and independent cascade (IC) models. Experimental results show that our proposed algorithm achieves a diffusion performance better by 1.5 times than several state-of-the-art algorithms and comparable results in diffusion scale with the Greedy algorithm. Also, the proposed algorithm is 2.4 times faster than previous methods.

Keywords : influence maximization, dynamic social networks, diffusion, social influence, graphs
Conference Title : ICSNAM 2022 : International Conference on Social Network Analysis and Mining
Conference Location : Rome, Italy
Conference Dates : June 02-03, 2022