Semantically enhanced network analysis for influencer identification in online social networks

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© 2017 Influencers in a social network are members that have greater effect in the online social network (OSN) than the average member. In the specific social networks known as communities of practice, where the focus is an specific area of knowledge, influencers are key for the healthy working of the OSN. Approaches to influencer detection using graph analysis of the network can be mislead by the activity of users that are not contributing to the OSN purpose, bogus generators of documents with no relevant information. We propose the use of semantic analysis to filter out such kind of interactions, achieving a simplified graph representation that preserves the main features of the OSN, allowing the detection of true influencers. Such simplification reduces computational costs and removes bogus influencers. We demonstrate the approach applying fuzzy concept analysis (FCA) and latent Dirichlet analysis (LDA) to compute document similarity measures that allow to filter out irrelevant inte