

Evaluation of the likelihood of friend request acceptance in online social networks

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ABSTRACT

Recent years online social networks (OSNs) have become an essential digital platform in the daily life of billions of earth inhabitants. Despite the advantages of easy communication and information sharing, OSNs users often fell in trouble causing by security breaches and violations. A recurring example of the troubles arises due to a rash acceptance of the friendship request, which can lead to the disclosure of personal information and vulnerability to an attack. Support for making a secure friendship decision is limited in the modern OSNs, making their use hazardous especially for the groups of children and young people. To overcome this issue, the paper proposes a method for evaluating the likelihood to become a friend in support of promoting hazard-free cyber environments. The proposed approach allows a user to define a model of a friend-to-be, and incoming friend requests are evaluated with reference to this model. The model takes into account the attributes (like common interests) and the behavioral properties of a friend-to-be (like frequency of the posts). The method allows for filtering friend requests to the given users and triggering notification of anomalous behaviors in an OSN. An empirical study proves the validity of the proposed model and its favorable characteristics against existing methods in the current OSN platforms.

KEYWORDS

Online social network (OSN); Friend request acceptance (FRA); Decision making; Recommender system; Hazard-free cyber environment

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