

A Context-Sensitive Trust Model for Online Social Networking

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ABSTRACT:

In Social Networking Sites (SNSs), users tend to accept friend requests and share their personal information based on intuitive trust levels. Mistakenly trusting and sharing private information with malicious users may lead to a wide variety of privacy attacks. In the quest to address this problem, this paper proposes a context-sensitive trust model. The proposed trust model was designed using fuzzy logic theory and implemented using MATLAB. Contrary to existing trust models, the context-sensitive trust model does not rely on the transitive relationship but rather addresses the subjectivity aspect of trust in SNSs. Furthermore, the proposed trust model allows social network users to evaluate the degree of trustworthiness of an unknown user based on their own trust rules and contextual parameters found on the user's profile. The context-sensitive trust model shows an accuracy of 80% in evaluating the trustworthiness of an unknown user. As a result, the presented trust model could help social network users to evaluate the trustworthiness of an unknown user before mistakenly trusting and sharing private information with malicious users.