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Huddling For Anonymization Of Compacted And Disseminated Public Systems

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Abstract:
Social network: a social structure consists of nodes and ties. Noes are the individual actors within the networks May be different kinds May have attributes, labels or classes Ties are the relationships between the actors May be different kinds Links may have attributes, directed or undirected Social networks have received dramatic interest in research and development. We developed heuristics to deal with the problem, In this paper, we survey the very recent research development on privacy-preserving publishing of graphs and social network data. Our metric for data quality is the number of rules that can still be mined and the number of rules that appear as a side effect We developed heuristic algorithms to minimize the new rules of the concept.

Keywords: Anonymization, Randomization, Generalization, Privacy Disclosure, So-
cial Networks.

I **Introduction:**

Social networking is the grouping of individuals into specific groups, like small rural communities or a neighborhood subdivision. 90% of college students visit social networking sites on a regular basis Social learning is learners learning from each other .Today's students want to document their feelings and insights in a highly timely manner. Social learning can increase comprehension of material and create new channels for students to learn. Social networks are of signicant importance in various application domains such as marketing, psychology, epidemiology and homeland security. The management and analysis of these networks have attracted increasing interests in the sociology, database, data mining and theory communities. Most previous studies are focused on revealing interesting properties of networks and discovering e±cient and e®ective analysis
methods [5{7, 14, 15, 23{25, 27, 36{40]. The system explore how the online social network data could be used to predict some individual private trait that a user is not willing to disclose (e.g. political or religious affiliation) Such social networks are of interest to researchers from many disciplines, be it sociology, psychology, market research, or epidemiology. However, the data in such social networks cannot be released as is, since it might contain sensitive information. Therefore, it is needed to anonymize the data prior to its publication in order to address the need to respect the privacy of the individuals whose sensitive information is included in the data. Data anonymization.

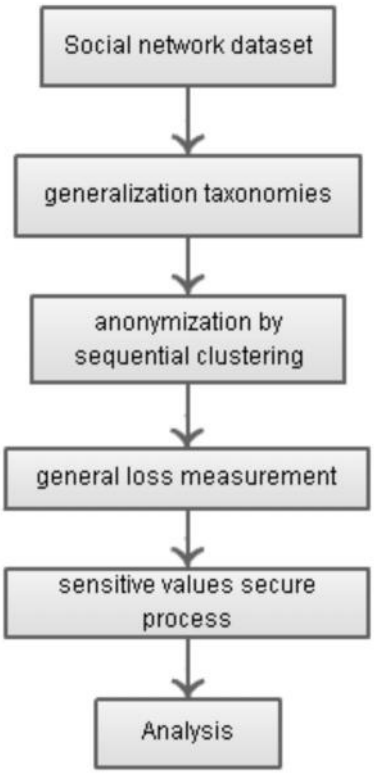
Ii Existing Work:

In their most basic form, networks are modeled by a graph, where the nodes of the graph correspond to the entities, while edges denote relations between them. Real social networks may be more complex or contain additional information. For example, in networks where the described interaction is asymmetric (e.g., a financial transaction network), the graph would be directed; if the interaction involves more than two parties (e.g., a social network that describes comembership in social clubs) then the network would be modeled as a hypergraph; in case where there are several types of interaction, the edges would be labeled; or the nodes in the graph could be accompanied by attributes that provide demographic information such as age, gender, location, or occupation which could enrich and shed light on the structure of the network. Such social networks are of interest to researchers from many disciplines, be it sociology, psychology, market research, or epidemiology. However, the data in such social networks cannot be released as is, since it might contain sensitive information. Therefore, it is needed to anonymize the data prior to its publication in order to address the need to respect the privacy of the individuals whose sensitive information is included in the data. Data anonymization typically trades off with utility. Hence, it is required to find a golden path in which the released anonymized data still holds enough utility, on one hand, and preserves privacy to some accepted degree on the other hand.

Disadvantages Of Existing System:
In an existing system, the complexity in communication increases and security level is low in social network system.

Iii Our Contribution
The study of anonymizing social networks has concentrated so far on centralized networks, i.e., networks that are held by one data holder. However, in some settings, the network data is split between several data holders, or players. For example, the data in a network of email accounts where two nodes are connected if the number of email messages that they exchanged was greater than some given threshold, might be split between several email service providers. As another example, consider a transaction network where an edge denotes a financial transaction between two individuals; such a network would be split between several banks. In such settings, each player controls some of the nodes (his clients) and he knows only the edges that are adjacent to the nodes under his control. It is needed to devise secure distributed protocols that would allow the players to arrive at an anonymized version of the unified network. Namely, protocols that would not disclose to any of the interacting players more information than that which is implied by its own input (being the structure of edges adjacent to the nodes under the control of that player) and the final output (the anonymized view of the entire unified network). The recent survey by Wu et al. about privacy-preservation in graphs and social networks concludes by recommendations for future research in this emerging area. One of the proposed directions is distributed privacy-preserving social network analysis, which "has not been well reported in literature."

Advantages
We deal with social networks where the nodes could be accompanied by descriptive data, and propose two novel anonymization methods of the third category (namely, by clustering the nodes). Our algorithms issue anonymized views of the graph with significantly smaller information losses than anonymizations issued by the algorithms. We also devise distributed versions of our algorithms and analyze their privacy and communication complexity.



IV Conclusion:
We surveyed recent studies on anonymization techniques for privacy-
preserving publishing of social network data. The research and de-
velopment of privacy-preserving social network analysis is still in its
early stage compared with much better studied privacy-preserving data
analysis for tabular data. Our methods resort to efficient approximation algorithms based on sampling. By sampling we avoid visiting all nodes in the vicinity of a user and thus attain improved performance. The utility of our approach was demonstrated by running experiments on real and synthetic data sets. Further, we showed that our algorithms are able to efficiently estimate the ordering of a list of items that lie on nodes in a user's network providing support to ranking algorithms and strategies. Our research suggests methods for quickly collecting information from the neighborhood of a user in a dynamic social network when knowledge of its structure is limited or not available. Our methods resort to efficient approximation algorithms based on sampling.

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