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TIMELY QUARANTINE RUMOUR IDENTIFICATION AND REDUCTION SYSTEM

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ABSTRACT---***Identifying rumor sources in social networks plays a critical role in limiting the damage caused by them through the timely quarantine of the sources. However, the temporal variation in the topology of social networks and the ongoing dynamic processes challenge our traditional source identification techniques that are considered in static networks. We reduce the time-varying networks to a series of static networks by introducing a time-integrating window. Then instead of inspecting every individual in traditional techniques, we adopt a reverse dissemination strategy to specify a set of suspects of the real rumor source.***

Keywords-- SocialNetwork,Dessemination,SpreadingPath,JordanMethod,Jsp,Servlets,Login,RumourMessage

I. INTRODUCTION

The main aim of this project is to identify the rumor messages, after finding make invisible those messages to all the users and block the rumor person account in the social Network. Identifying rumor sources in social networks plays a critical role in limiting the damage caused by them through the timely quarantine of the sources. However, the temporal variation in the topology of social networks and the ongoing dynamic processes challenge our traditional source identification techniques that are considered in static networks. We reduce the time-varying networks to a series of static networks by introducing a time-integrating window. Then instead of inspecting every individual in traditional techniques, we adopt a reverse dissemination strategy to specify a set of suspects of the real rumor source.

II. RELATED WORK

D. N. Yang, H. J. Hung, W. C. Lee, and W.Chen, Friending recommendation has successfully contributed to the explosive growth of online social networks. Most friending recommendation services today aim to support passive friending, where a user passively selects friending targets from the recommended candidates. In this paper, we advocate a recommendation support for active friending, where a user actively specifies a friending target. To the best of our knowledge, a recommendation designed to provide guidance for a user to systematically approach his friending target has not been explored for existing online social networking services. To maximize the probability that the friending target would accept an invitation from the user, we formulate a new optimization problem, namely, Acceptance Probability Maximization (APM), and develop a polynomial time algorithm, called Selective Invitation with Tree and In-Node Aggregation (SITINA), to find the optimal solution. We implement an active friending service with SITINA on Facebook to validate our idea. Our user study and experimental results reveal that SITINA outperforms manual selection and the baseline approach in solution quality efficiently.

Budak, D. Agrawal, and A. E. Abbadi, In this work, we study the notion of competing campaigns in a social network. By modeling the spread of influence in the presence of competing campaigns, we provide necessary tools for applications such as emergency response where the goal is to limit the spread of misinformation. We study the problem of influence limitation where a "bad" campaign starts propagating from a certain node in the network and use the notion of limiting campaigns to counteract the effect of misinformation. The problem can be summarized as identifying a subset of individuals that need to be convinced to adopt the competing (or "good") campaign so as to minimize the number of people that adopt the "bad" campaign at the end of both propagation processes. We show that this optimization problem is NP-hard and provide approximation guarantees for a greedy solution for various definitions of this problem by proving that they are submodular. Although the greedy algorithm is a polynomial time algorithm, for today's large scale social networks even this solution is computationally very expensive. Therefore, we study the performance of the degree centrality heuristic as well as other heuristics that have implications on our specific problem. The experiments on a number of close-knit regional networks obtained from the Facebook social network show that in most cases inexpensive heuristics do in fact compare well with the greedy approach.

A.Montanari and A. Saberi, great variety of social or technological innovations spread in a population through the network of individual interactions. The dynamics of this process results in the formation of new norms and institutions and has been an important subject of study in sociology and economics (1, 2). More recently, there has been a surge of interest in this subject because of the rapid growth and popularity of online social interaction. By providing new means for communication and interaction, the Internet has become a unique environment for the emergence and spread of innovations. At the same time, the Internet has changed the structure of the underlying network of interactions by allowing individuals to interact independently of their physical proximity. Does the structure of online social networks favor the spread of all innovations? What is the impact of the structure of a social network on the spread of innovations? The present paper tries to address these questions

B. Wang, G. Chen, L. Fu, L. Song, and X. Wang,said Rumor blocking is a serious problem in large-scale social networks.Malicious rumors could cause chaos in society and hence need to be blocked as soon as possible after being detected.In this paper, we propose a model of dynamic rumor influence minimization with user experience (DRIMUX).Our goal is to minimize the influence of the rumor (i.e., the number of users that have accepted and sent the rumor) by blocking a certain subset of nodes. A dynamic Ising propagation model considering both the global popularity and individual attraction of the rumor is presented based on realistic scenario. In addition, different from existing problems of influence minimization, we take into account the constraint of user experience utility. Specifically, each node is assigned a tolerance time threshold. If the blocking time of each user exceeds that threshold, the utility of the network will decrease. Under this constraint, we then formulate the problem as a network inference problem with survival theory, and propose solutions based on maximum likelihood principle. Experiments are implemented based on large-scale real world networks and validate the effectiveness of our method.

J. Leskovec, L. A. Adamic, and B. A. Huberman present an analysis of a person-to-person recommendation network, consisting of 4 million people who made 16 million recommendations on half a million products. We observe the propagation of recommendations and the cascade sizes, which we explain by a simple stochastic model. We analyze how user behavior varies within user communities defined by a recommendation network. Product purchases follow a 'long tail' where a significant share of purchases belongs to rarely sold items. We establish how the recommendation network grows over time and how effective it is from the viewpoint of the sender and receiver of the recommendations. While on average recommendations are not very effective at inducing purchases and do not spread very far, we present a model that successfully identifies communities, product, and pricing categories for which viral marketing seems to be very effective.
A. McCallum, A. Corrada-Emmanuel, and X. Wang , in social network analysis (SNA) has modeled the existence of links from one entity to another, but not the language content or topics on those links. We present the AuthorRecipient-Topic (ART) model for social network analysis, which learns topic distributions based on the direction-sensitive messages sent between entities. The model builds on Latent Dirichlet Allocation (LDA) and the Author-Topic (AT) model, adding the key attribute that distribution over topics is conditioned distinctly on both the sender and recipient—steering the discovery of topics according to the relationships between people. We give results on both the Enron email corpus and a researcher's email archive, providing evidence not only that clearly relevant topics are discovered, but that the ART model better predicts people's roles.

L. Fu, W. Huang, X. Gan, F. Yang, and X. Wang, The capacity of a wireless network is studied when nodes communicate with one another in the context of social groups. All the nodes are assumed to have the same number of independent long-range social contacts, one of which each selects randomly as its destination. The Euclidean distance between a source and its social group members follows a power-law distribution and communication between any two nodes takes place only within the physical transmission range resulting in communication over multi-hop paths. The capacity order of such a composite network is derived as a function of the number of nodes, the social-group concentration, and the size of social groups. Our results demonstrate that when each node has constant number of contacts which does not increase with network size growth, and are geographically concentrated, then the network behaves similar to social networks and communication network does not have any effect on the throughput capacity. On the other hand, when the social contact population grows in time, or social connectivity among nodes is highly distributed, then the communication network is the dominant factor and the composite network behaves similar to wireless networks, i.e., the capacity is the same as Gupta and Kumar results. When neither social connectivity nor communication network is dominant

X. Rong and Q. Mei ,The spreading of innovations among individuals and organizations in a social network has been extensively studied. Although the recent studies among the social computing and data mining communities have produced various insightful conclusions about the diffusion process of innovations by focusing on the properties and evolution of social network structures, less attention has been paid to the interrelationships among the multiple innovations being diffused, such as the competitive and collaborative relationships between innovations. In this paper, we take a formal quantitative approach to address how different pieces of innovations "socialize" with each other and how the interrelationships among innovations affect users' adoption behavior, which provides a novel perspective of understanding the diffusion of innovations. Networks of innovations are constructed by mining large scale text collections in an unsupervised fashion. We are particularly interested in the following questions: what are the meaningful metrics on the network of innovations? What effects do these metrics exert on the diffusion of innovations? Do these effects vary among users with different adoption preferences or communication styles? While existing studies primarily address social influence, we provide a detailed discussion of how innovations interrelate and influence the diffusion process.

A. Bessi, F. Petroni, M. Del Vicario, F. Zollo, A. Anagnostopoulos, A. Scala, G. Caldarelli, and W. Quattrociocchi, Nowadays, everyone can produce and access a variety of information by actively participating in the di↵usion and reinforcement of narratives. The spreading of unsubstantiated rumors, whether intentional or unintentional, could have serious consequences; the World Economic Forum has listed massive digital misinformation as one of the main risks for the modern society [1]. An interesting example is the popular case of Senator Cirenga's law, proposing to fund policy makers with 134 million of euros (10% of the Italian GDP) in case of defeat in the political competition. This was an intentional joke—the text of the post was explicitly mentioning its provocative nature—which became popular within online political activists. In this work we focus on two distinct types of news—science and conspiracy—di↵ering in the possibility of verifying their content. Science news aim at diffusing scientific knowledge and scientific thinking, whereas conspiracy news provide alternative arguments that are difficult to be verified. Conspiracists tend to reduce the complexity of reality by explaining significant social or political events as secret plots conceived by powerful individuals or organizations. Misinformation can be particularly dicult to correct [2, 3]. Recently [4] it has been shown that conspiracist and mainstream information reverberate in a similar way on social media and that users generally exposed to conspiracy stories are more prone to like and share satirical information [5]. We analyze a sample of 1.2M Facebook Italian users consuming scientific and conspiracy news

E. Serrano, C. A. Iglesias, and M. Garijo, Viral marketing, marketing techniques that use pre-existing social networks, has experienced a significant encouragement in the last years. In this scope, Twitter is the most studied social network in viral marketing and the rumor spread is a widely researched problem. This paper contributes with a (1) novel agent-based social simulation model for rumors spread in Twitter. This model relies on the hypothesis that (2) when a user is recovered, this user will not influence his or her neighbors in the social network to recover. To support this hypothesis: (3) two Twitter rumor datasets are studied; (4) a baseline model which does not include the hypothesis is revised, reproduced, and implemented; (5) and a number of experiments are conducted comparing the real data with the two models results.

III. EXISTING SYSTEM

The ubiquity and easy access of social networks not only promote the efficiency of information sharing but also dramatically accelerate the speed of rumor spreading. After finding fake messages the same fake messages spreading over the network.existing method will not eliminate fake messages. Rumors combine the characteristics of the "word-of-mouth" spreading scheme with the dynamic connections between individuals in time-varying social networks. The existing techniques generally require firm connections between individuals (i.e., static networks) so that administrators can trace back along the determined connections to reach the spreading sources. The firm connections between users are the premise of constructing spanning trees in these methods. Some other methods detect rumor sources by measuring node centralities. The individual who has the maximum centrality value is considered as the rumor source. All of these centrality measures are based on static networks. Time-varying social networks, where users and interactions evolve over time, have led to great challenges to the traditional rumor source identification techniques.

IV. PROPOSED SYSTEM

The proposed system going to restrict the rumor message from friend list if we find any rumor messages post in social network this kind of post will not be forward anymore. So we provide one rumor option in the social network. If user find friends post contains any rumor messages they can intimate to the authority person, the authority will verify whether the messages is rumor message or not by using news articles. The rumor option contain message as well as user name initiate the message to transfer first. After verification the rumor message true that person account will be monitored and maintained threshold for their account. The user post many rumor message admin provide the warning to them but they not consider the warning repeatedly posted rumor messages then their account has been blocked by the admin. Then the rumor post will be deleted from all the user account so that the posts will not be share any person we can restrict and eliminate the rumor post in friends list itself. User is able to create an account in social media and he is able to post many things like images,post etc..The admin will be able to monitor all the activities of the user and able to control the rights of user.The user can able to add his friends also delete his friends incase of any mistakes. The admin is the person who has full control of the system and he is the acces provider.The role of admin here is to remove a post completely from the system if the post is found guilty or fake if he recives more than three complaints from the users of social media. The social network is the facebook like application which is created by using javascript,jsp,sql server technologies.

V. SYSTEM ARCHITECTURE

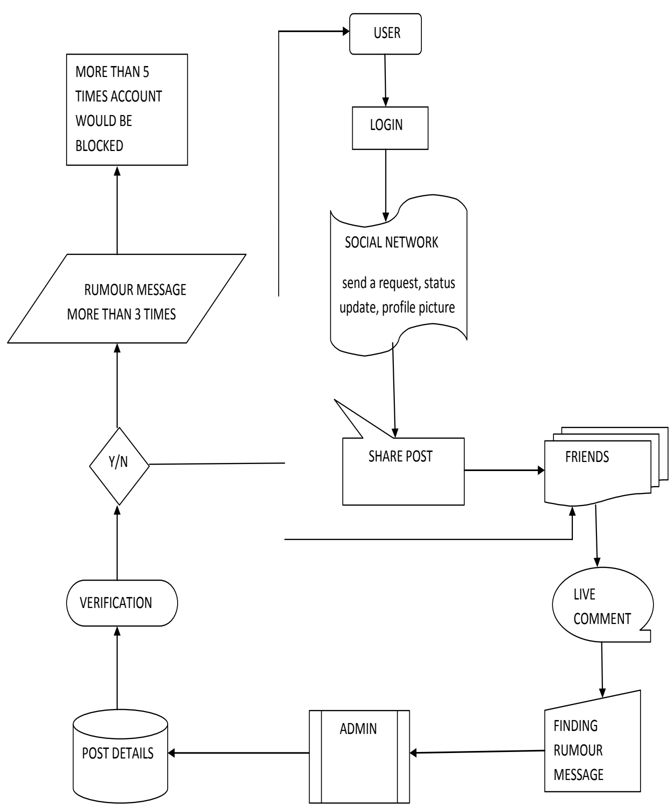

Fig. 1 Architecture diagram of overall system with its working

A. User

User is able to create an account in social media and he is able to post many things like images,post etc..The admin will be able to monitor all the activities of the user and able to control the rights of user.The user can able to add his friends also delete his friends incase of any mistakes.

B. Admin

The admin is the person who has full control of the system and he is the acces provider.The role of admin here is to remove a post completely from the system if the post is found guilty or fake if he recives more than three complaints from the users of social media

C.*Social Network*

The social network is the facebook like application which is created by using javascript,jsp,sql server technologies.This is the complete interface between user,admin and user's friends.The friends of user can report a post as rumour in case of rumor messages found

VI. MODULES

Modules:

1. **Social Network**
2. **Sharing Post and Received Messages**
3. **Rumor Message Finding Process**
4. **Admin process**

1.Social Network:

We developed on of the social network like a face book, once user sign up this network application the basic things are done in this module. The user can make profile id and choose profile picture for their account, it will be visible to others. Other can able to identify their account by profile picture, the user can send friend request to others. User will receive friend request from other account if they want can add them as a friend list otherwise can delete friend request. Number of friends will be shown on their account and times of India flash news will be displayed in this social network foe every user.

2.Sharing Post and Received Messages:

In this module, user can send the post to their friends when the user received post message the share option and comments option will be their they can give the comments for the post, if user share any post the shared post all the information will be stored in the database with date and time. User will see all the received post information on different page. News article will be displayed on the page if want to share any flash news details can see on the news article and share the news to friends.

3.Rumor Message Finding Process:

The rationale of the reverse dissemination method is to send copies of rumors along the reversed dynamic connections from observed nodes to exhaust all possible spreading paths leading to the observation. The node from which all the paths, covering all the observed nodes' states, originated is more likely to be a suspect. The reverse dissemination method is inspired from the Jordan method. The reverse dissemination method is based on time-varying social networks rather than static networks. In this process gives near to the rumor but not giving exact rumor in the social network. If any user find out the shared post contains fake message there is option available to rumor in the social network. Whenever the user find out the post message contain rumor messages they can use that option. The user provides any message with tagged user in the rumor option it will directly go the authority person in the social network.

4.Admin process:

The rumor message verification process will be happening in the admin process. Authority person has rights to provide the warning to the user account whenever the rumor message posted from their account. He get rumor messages from user, those message will compared to all the flash news and other articles. If it is not present any of the articles the user will be under monitored and maintain message threshold for their account. If threshold level is low we provide the warning for the user when the threshold is too high we block the rumor user account. If suppose admin received message is present in any of the article we provide the response to the user who is used rumor option in their account.

VII. CONCLUSION

Some people may post on social networks a rumor about an upcoming of earthquake, which will cause chaos among the crowd and hence may hinder the normal public order. In this case, it is necessary to detect the rumor source and delete related messages, which may be enough to prevent the rumor from further spreading. However, in certain extreme circumstances such as terrorist online attack, it might be necessary to disable or block related Social Network (SN) accounts to avoid serious negative influences. Thus we can here by conclude by saying that this application is very usefull for removing rumour messages and save the people.

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