Social Network based disaster analysis using user trust behavior model

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Abstract – The objective of this paper is to warn the people from natural or artificial disaster from social network through user behaviour model. Also to implement a trust based user behaviour model in the social network. This will saves more lives from disaster. The prestigious person, higher political authorities and scientists are the authorized and trusted persons. Comments or posts from these types of person will be considered as the important and serious information issue. This is because they may predict the future disaster problems like earthquake, tsunami, flood, storm, fire and any other types of nature disaster. Warning will be sent the particular area's people, through social network. Text categorization is used to find the disaster related words in authorized persons posts and comments.

Index Terms— Text categorization, Improved Gradient Boosting Algorithm, Global pattern report

1. INTRODUCTION

Today, social media spending makes up a small fraction of most business marketing budgets. In 21st-Century, we use them to communicate, find information quickly, and increasingly, to shop for products. Your Yelp, Face book, LinkedIn and other social pages provide the perfect opportunity to make a lasting impression. Start by optimizing your profiles and making important information easy-to-find. According to the survey 71 % of the internet users are using Social Network and 72 % of the internet users are viewing news on online. So that according to our objective, the problem definition is the combination of the networks using web services.

A kind of live loss which is was probably happened by natural disaster . Disease epidemics are sometimes considered natural disasters, but may be put into a different category. In few cases, natural and human factors may combine to produce a disaster. The Network detection technology continuously identifies and confirms in real time, the location, speed, and magnitude of various disasters. It then provides continuous transmission of information about the disasters to a Central Processing Site for analysis.

These methods are quite old and quite expensive. And implementing in real-time may cause various communication problems like data transmission rate, finding the accuracy, finding the location and etc. A there should be a presence of person near by the network detector. In case of any failure in the hardware the total system will be in out of control. In order to overcome these above given problems, here we are introducing a latest method called as social network based disaster analysis. Now a day each and every person is having account in the social network. From scientist to students various categories of person are available in the social network. This is the major advantage in this project. Here the prestigious person, higher political authorities and scientists are the authorized and trusted persons. Comments or posts from these types of person will be considered as the important and serious information issue. This is because they may predict the future disaster problems like earthquake, tsunami, flood, storm, fire and any other types of nature disaster. Here an advanced categorization method has been implemented in this project. This method will monitor the trusted and authorized member's posts and comments. In case a group of scientists is posting or discussing about the a disaster in a particular area means, that post to discussed by some other trusted persons means, the discussion will be taken as a issue. And a warning will be sent the particular area's people, through social network.

2. RELATED WORKS

In Efficient estimation of word representations in Vector Space T. Mikolov, K. Chen, G. Corrado, and J. Dean states that their main goal of this is to introduce techniques that can be used for learning high-quality word vectors from huge data sets with billions of words, and with millions of words in the vocabulary[1]. According to this system ,none of the previously proposed architectures has been successfully trained on more than a few hundred of millions of words, with a modest dimensionality of the word vectors between 50 -100. This proposed techniques for measuring the quality of the resulting vector representations, with the expectation to that words can have multiple degrees of similarity. This has been observed earlier in the context of inflectional languages - for example, nouns can have multiple word endings, and

if we search for similar words in a subspace of the original vector space, it is possible to find words that have similar endings. In this, it tries to maximize accuracy of these vector operations by developing new model architectures that preserve the linear regularities among words[1]. We design a new comprehensive test set for measuring both syntactic and semantic regularities, and show that many such regularities can be learned with high accuracy. Moreover, we discuss how training time and accuracy depends on the dimensionality of the word vectors and on the amount of the training data.[1]

The recently introduced continuous Skip-gram model is an efficient method for learning high-quality distributed vector representations that capture a large number of precise syntactic and semantic word relationships done by T. Mikolov, I. Sutskever, K. Chen, G. S. Corrado, and J. Dean under the topic Distributed representations of words and phrases and their compositionality. In several extensions that improve both the quality of the vectors and the training speed[2]. By sub sampling of the frequent words we obtain significant speedup and also learn more regular word representations. It also describes a simple alternative to the hierarchical soft max called negative sampling[2]. An inherent limitation of word representations is their indifference to word order and their inability to represent idiomatic phrases. For example, the meanings of "Canada" and "Air" cannot be easily combined to obtain "Air Canada". Motivated by this example, we present a simple method for finding phrases in text, and show that learning good vector representations for millions of phrases is possible.With rapid development of computer and network technology, micro blog system provides to exchange information[3]. Especially ,how to quickly obtain information and release information for a big data .Micro-blog, includes content contains text , picture and other information this system was proposed by Ji Yangl,Yu-Xia Yaol,Chin-Ling Chenl, Jungpil under the topic Design and Implementation of web Micro blogging System. [3].Related to this Real-Time Multimedia Social Event Detection in Micro-blog by Sicheng Zhao ,Yue Gao ,Guiguang Ding and Tat-Sebg Chua proposed system they use Micro-blog system to explore the rich information from relevant micro blogs and it shows that it can significantly improve the event detection Performance[4].It achieves superior performance over the state-of-the-art approaches on all evaluation metrics for both static and real-time event detection.[4] Performance using Artificial Neural Networks and Deep Learning - Nadiya Straton1, Raghava Rao Mukkamala1, Ravi Vatrapu1 proposed a system with

a objective to find the right predictive model that can help health care organizations in terms of their social media marketing strategy and tactics.[7]ANN with n-gram analyses for feature extraction. Optimal neural network topology was selected to achieve best possible results ANN classifies low engagement cluster with highest accuracy of 90%. Simple models can lead to accurate and reliable predictions of Face book post performance. Deep learning can improve data analyses and achieve higher accuracy results than simple ANN network due to the increased number of hidden units and network layers that disseminate data points by weighing them in each layer.[7]

3. PROPOSED SYSTEM

Nowadays social network is one of the most common networks used to share the information .A Social Network is a web application that is accessed over a network such as the Internet or an intranet. The ability to update and maintain web applications without distributing and installing software on potentially thousands of client computers is a key reason for their popularity, as is the inherent support for cross-platform compatibility Monitoring Trusted Member here trusted members will be authorized by the social network admin. The trusted members may authorize scientists, research scholars, politicians and etc. All the activities of these people will monitor under remote monitoring methods. These each and every post is important for the society. Their prediction may become true on some times. But the possibilities to happen will be more. This trusted people will be get authorize worldwide and Categorization Techniques module will fetch information for the authorized people. It will monitor and categorize their comments, posts, blogs and etc in the social network. The categorization technique will find out the disaster based words in their post and it will analyze the importance Merging Social Network Online social networks have received the analyzed word. An important characteristic of these networks is its real time nature. A sample social network designed and we investigate the real time interaction of some natural disaster events. To avoid rumors ,verifying the occurrence of many authorized users. Once the occurrence of the target event is confirmed a notification comment will be send to the registered users belonging to the particular location of the targeted area. Our system detects some natural disaster events promptly and notification is delivered fast.

Global Patterning Report module will produce graph patterns with more analyzed data set. All the output data from the previous module will be given as input in this module. So that we can produce various types of charts and graphs. Duplication will be avoided with more information results. A chart will generated for positive, negative and neural comments. Number of comments and number of repeated comments can be generated.

Each and every data will be taken for the consideration for gathering information from the other networks. The text categorization will deals with the access model specification, which will works on every updates on the profile. So that in case the user may change the profile details, at that time the user's recommendation also change. This process will do automatically. Another advantage is user can access other networks independently. And finally the data will be published in the head network (i.e) social network. Panels will be designed in the front end for displaying all the recommended information. All the displayed information are more relevant to the user profile and user need.

Micro blogging with ANN -the process of converting the information into codes. And the codes can be passed through any networks for data access. The gathered information from the previous module will be taken as a group of data. These data will be converted to micro blogging content. The micro blogging contains alpha numerical codes like QE098HGJ!?*, all the code represents the person's character and the recommendations. Using Artificial Neural Network the blog content will be transferred to other tier networks like ecommerce application and news channels. This is secured way of transferring the data from architecture to architecture

3.1 ALGORITHM
Here the proposed system can be done with the algorithm called Improved Gradient Boosting Algorithm. This algorithm contains Data set, Vocabulary (Extracted from dataset), Categorization: sen count, Occurrence, Array Deceleration: Pj denotes positive and Ni denoted negative, Result.

4. EXPERIMENTAL ANALYSIS

In the existing system feature mapping technique has been implemented. The key idea is to use a small number of linked users across sites as a bridge to learn a function which maps the original feature representation. But all the side bridging is based on one to one network; this is the major drawbacks in the existing system. Also the ping functions since it is not powerful to capture higher order transformation relationship between input and output. The importance of each attribute by conducting experiments results also tedious. Here an advanced categorization method has been implemented in this project. This method will monitor the trusted and authorized member's posts and comments. In case a group of scientists is posting or discussing about the a disaster in a particular area means, that post to discussed by some other trusted persons means, the discussion will be taken as a issue. And a warning will be sent the particular area's people, through social network.

This method is done through the categorization technique from the given input in the network data analysis model. Here in order to implement the foreground and background data verification, neural networks will be used for data training purpose. These methods will analysis the input data from the data set. And in case of customized social networks, it will analyse online data also. Each sentence will be analysed with categorization methods.

The micro blogging deals with all the information like personal details, geo location information and etc. But the actual contents will be transferred from one location to another location. This makes more insecurity during the time of data transfer. In case of a intruder trying to intrude the network means, during the time of data transmission the entire details can be traced out. There are no special security methods implemented in the existing system to block the intruders during the data transfer.

4.1 Software used:
FRONTEND   : ASP.NET 2010
ODING LANDUAGE: C#
BACK END   : SQL SERVER 2008
CLIENT SERVER TOOL: AJAX 2.0
SCRIPTING LANGUAGE: Java Script

5. CONCLUSION

In this paper, we discussed about the disaster analysis using social network. This makes awareness efficiently and simple to the people. All the information will be converted into alpha numerical characters. The special enhancement has been done for the micro blogging. It works on an intelligence method. The information given

to the user based on the profile of user. User customize options are available to the user profile

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