THE REAL TIME URBAN EMERGENCY EVENTS BASED ON 5W MODEL

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Abstract

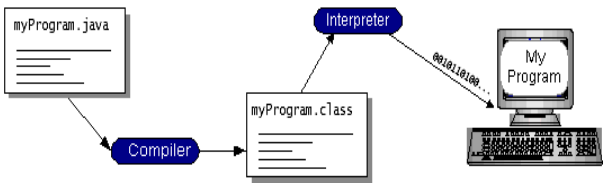
Crowd sourcing is a process of acquisition, integration, and analysis of big and heterogeneous data generated by a diversity of sources in urban spaces, such as sensors, devices, vehicles, buildings, and human. Our proposed method is to detect and describe the real time urban emergency events based on 5W model (what, where, when, who, and why) proposed model is used as emergency management field. This can provide useful information to analyze resist urban emergency events. It shows that good performance and high effectiveness compared to existing system.

Index Terms *– crowd sourcing, emergency events, social media, big data, urban computing*

1. Introduction

Cloud computing has the scope of moving OS to the web. It can bring about collaboration while solving platform interdependence problems. The important challenges for the transition to utility computing are performance and security. In the long run, performance of the system would only benefit the user with cheaper rates. The security of the system needs a serious check with good intrusion detection mechanisms

It basically is a cycle where technology triggers infrastructure growth which improves operational efficiency. The efficiency concerns and demands can bring about tough competition which would lower the costs and bring about new advancement in technology. The growth of cloud computing could be something similar to the telecommunication gadgets around. It might even bring an anytime, anywhere computing possible because users don't want to invest in new hardware or software for doing their needs. They can rather use the services provided. This has been further enhanced with the aesthetic needs of consumers and the introduction of good graphics processing software with their hardware requirements.



You can think of Java byte codes as the machine code instructions for the *Java Virtual Machine* (Java VM). Every Java interpreter, whether it's a development tool or a Web browser that can run applets, is an implementation of the Java VM.

1.1 THE JAVA PLATFORM

A platform is the hardware or software environment in which a program runs. We've already mentioned some of the most popular platforms like Windows 2000, Linux, Solaris, and Marcos. Most platforms can be described as a combination of the operating system and hardware. The Java platform differs from most other platforms in that it's a software-only platform that runs on top of other hardware-based platforms.

The Java platform has two components:

The Java Virtual Machine *(Java VM) and the* Java Application Programming Interface *(Java API)*

1.2. JAVA TECHNOLOGY*:*

An application is a standalone program that runs directly on the Java platform. A special kind of application known as a *server* serves and supports clients on a network. Examples of servers are Web servers, proxy servers, mail servers, and print servers. Another specialized program is a servlet. A servlet can almost be thought of as an applet that runs on the server side. Java Servlets are a popular choice for building interactive web applications, replacing the use of CGI scripts. Servlets are similar to applets in that they are runtime extensions of applications.

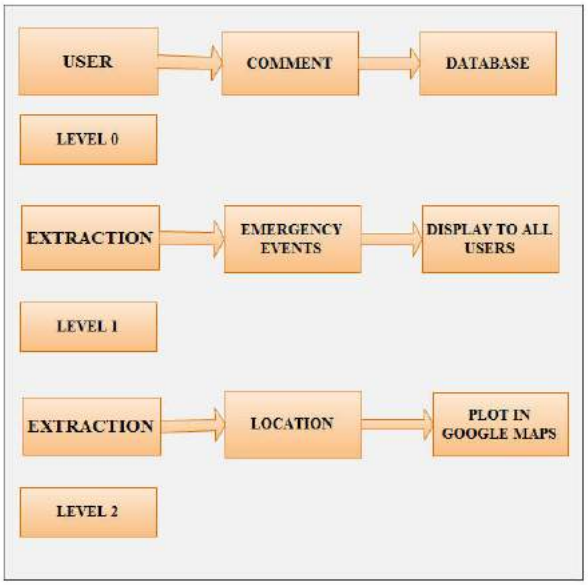
1.3 JAVA TECHNOLOGY CHANGE MY LIFE

Although the Java programming language is a powerful object-oriented language, it's easy to learn, especially for programmers already familiar with C or C++. Comparisons of program metrics (class counts, method counts, and so on) suggest that a program written in the Java programming language can be four times smaller than the same program in C++. The Java programming language encourages good coding practices, and its garbage collection helps you avoid memory leaks. Its object orientation, its JavaBeans component architecture, and its wide-ranging, easily extendible API let you reuse other people's tested code and introduce few. The 100% Pure Java™ Product Certification Program has a repository of historical process manuals, white papers, brochures, and similar materials online. You can upgrade applets easily from a central server. Applets take advantage of the feature of allowing new classes to be loaded "on the fly," without recompiling the entire program.

We represent the general datasets analysis of different networks such as social networks and product networks. All the networks are connected, undirected graphs.

2 SYSTEM ARCHITECTURE

When the user is posting a comment in a database then the level1 will be extract with the location with the help of finding the location with the goggle maps.



2.1 TECHNICAL HIGHLIGHTS

JavaFX is based on the concept of a "Common profile" that is intended to span across all devices supported by JavaFX. This approach makes it possible for developers to use a common programming model while building an application targeted for both desktop and mobile devices and to share much of the code, graphics assets and content between desktop and mobile versions

2.2 DRAG TO INSTALL

From the point of view of the end user "Drag-to-Install" allows them to drag a JavaFX widget and drop it onto their desktop. The application will not lose its state or context even after the browser is closed. An application can also be re-launched by clicking on a shortcut that gets created automatically on the users desktop,

3. LITERATURE REVIEW

When Remote Sensing Data meet Ubiquitous Urban Data: Fine-Grained Air Quality Inference

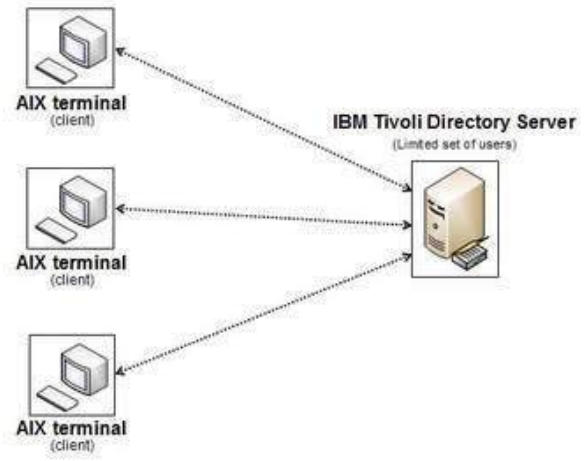
With the growth of the economy, the air quality is becoming a serious issue, especially for those developing countries, such as China. Therefore, it is very important for the public and the government to access real-time air quality information. Unfortunately, the limited number of air quality monitoring stations is unable to provide fine-grained air quality information in a huge city, such as Beijing. One cost-effective approach for obtaining fine-grained air quality information is to

infer air quality with those measured data at the monitoring stations. However, existing inference techniques have poor performance because of the extreme data sparsity problem (e.g., only 0.2% data are known). We observe that remote sensing has been a high-quality data source about urban dynamics. In this paper, we propose to integrate remote sensing data and ubiquitous urban data for air quality inference. There are two main challenges, i.e., data heterogeneity and incomplete remote sensing data. In response to the challenges, we propose a two-stage inference approach. In the first stage, we use the AOT remote sensing data and the meteorological data to infer the air quality values with an Artificial Neural Network (ANN). After this stage, we significantly reduce the percentage of empty cells in the tensor representing the spatial-temporal air quality values. In the second stage, we propose a tensor decomposition method to infer the complete set of air quality values. We use the spatial features (i.e., road features and POI features) and the temporal features (i.e., meteorological features) as the constraints in the tensor decomposition process. Experiments with real data sets show that our approach has profound performance advantage over the state-of-the-art methods, such as U-Air.

3.1 EXISTING SYSTEM

First identify the burst feature related to the user query and then organize the documents related to those burst features into an event hierarchy.
The response to the query is a combination of streams (e.g., news feeds, emails) that are sufficiently correlated and collectively contain all query keywords within a time period.

In his study, two important conclusions are given: (1) a seminal event may lead to several other events; (2) the events at the beginning may have more influence on the events coming immediately after than the events at the later time. Mackinnon used the ontologism to measure the similarity of events. However, these ontologism are difficult to get, which makes the work difficult to be used directly. The client that restricts the implementation of the system imposes these requirements. Typical pseudo requirements are the implementation language and the platform on which the system is to be implemented. These have usually no direct effect on the user's view of the system



3.2 PROPOSED SYSTEM

The proposed work is also related to event detection using click-through data. Event ranking with user attention is reported in [18] where the events are firstly detected from news streams. User attention is then derived from the number of page-views (collected through web browser toolbars) for all the news articles in the same event.

This paper proposes a 5W model for describing urban emergency events. The proposed 5W model includes what, where, when, who, and why elements to detect and analyze the urban emergency event.

The proposed model is based on crowd sourcing, which uses the real time nature of Weibo users. The proposed model is applied into the emergency management field, which can provide useful information to analyze and resist urban emergency events.Case studies on real data sets show the proposed model has good performance and high effectiveness in the analysis and detection of urban emergency events. This examines the logic of the system.If we are getting the output that is required by the user,then we can say that the logic is perfect.

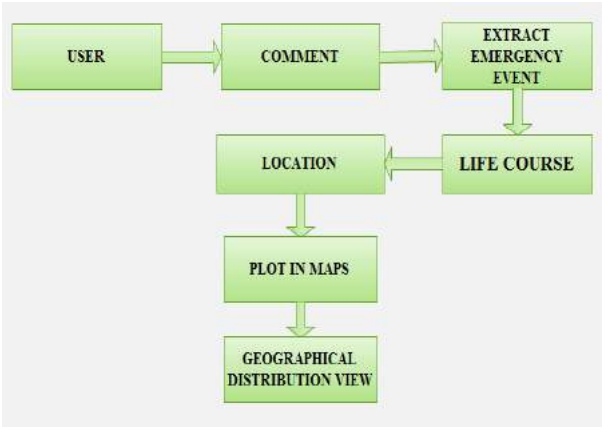


Fig 5: System Architecture

4. EXTRACTION FOR URBAN EMERGENCY EVENT

We are extracting the semantic, spatial, temporal, person and reason information from the social media user comments. The different ways of extraction methods are displayed here.

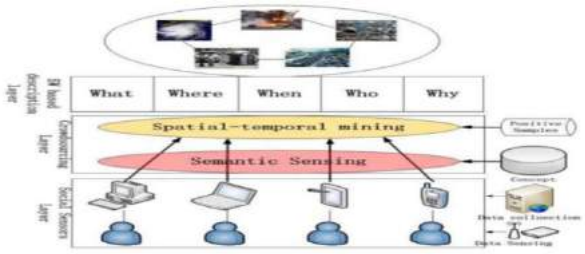
The semantic information (**What**): Describe what happened

The spatial information (**Where**): The happened place

The temporal information (**When**): The occurrence time and timeline

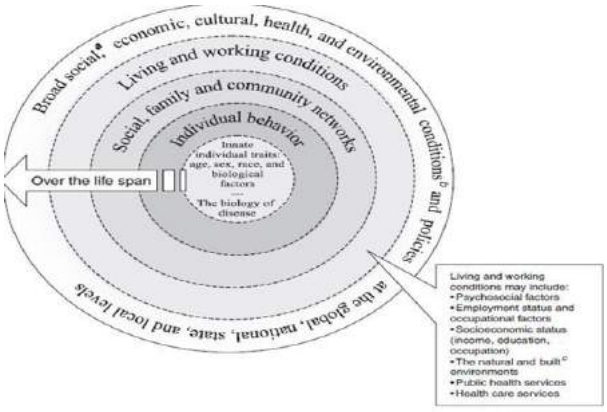
The person information (Who): The Participator and witness (**Not Essential**)

The reason information (**Why**): The reason (Not essential)



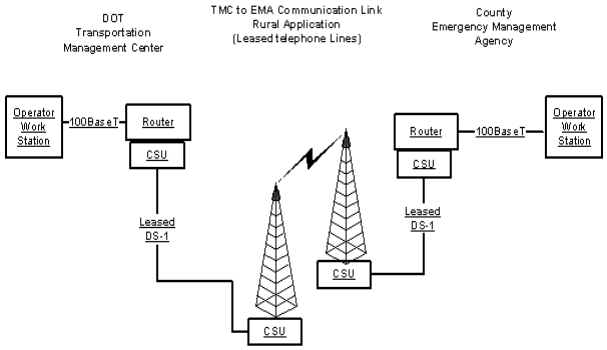
4.1. LIFE COURSE OF URBAN EMERGENCY EVENT

The life course of an urban emergency event is a time range from the starting timestamp to the ending timestamp. When an user comment about the specified urban emergency event, then we have to capture the life course of that particular event and then we have to display the content to all other user's for that particular life course.



4.2. LOCATION OF URBAN EMERGENCY EVENT

While the user used to comment about the urban emergency event, mean while at the background, we have to capture the latitude and longitude of the user and display all of them in the Google Maps. So that the user can get an idea about the geographical view of that location and distribution of data.



5. FEASIBILITY STUDY

The feasibility of the project is analyzed in this phase and business proposal is put forth with a very general plan for the project and some cost estimates. During system analysis the feasibility study of the proposed system is to be carried out. This is to ensure that the proposed system is not a burden to the company. For feasibility analysis, some understanding of the major requirements for the system is essential.

5.1. ECONOMICAL FEASIBILITY

This study is carried out to check the economic impact that the system will have on the

organization. The amount of fund that the company can pour into the research and development of the system is limited. The expenditures must be justified. Thus the developed system as well within the budget and this was achieved because most of the technologies used are freely available. Only the customized products had to be purchased.

5.2. TECHNICAL FEASIBILITY

This study is carried out to check the technical feasibility, that is, the technical requirements of the system. Any system developed must not have a high demand on the available technical resources. This will lead to high demands on the available technical resources. This will lead to high demands being placed on the client. The developed system must have a modest requirement, as only minimal or null changes are required for implementing this system.

5.3. SOCIAL FEASIBILITY

The aspect of study is to check the level of acceptance of the system by the user. This includes the process of training the user to use the system efficiently. The user must not feel threatened by the system, instead must accept it as a necessity. The level of acceptance by the users solely depends on the methods that are employed to educate the user about the system and to make him familiar with it. His level of confidence must be raised so that he is also able to make some constructive criticism, which is welcomed, as he is the final user of the system.

5.4. FUNCTIONAL REQUIREMENTS

Functional requirements specify which output file should be produced from the given file they describe the relationship between the input and output of the system, for each functional requirement a detailed description of all data inputs and their source and the range of valid inputs must be specified.

5.5. TOP-K-T recommendation algorithm

As the popularity and scale of crowd sourcing systems keep increasing, workers tend to spend more time on finding proper tasks matching their skills and interests than on the tasks themselves. The motive of our work is to help workers to instantly find best matching tasks and to help requesters to quickly identify the best workers for the tasks at hand.

Algorithm: TOP-K-T TASK RECOMMENDATION

Input: C→T:the category-task data structure
Output:L:an array of the top-k tasks for the worker
1: initialize output array L
2: passtonext←0
3: for i←1to Windex→C.size do
4: **Ctarget←get category(Windex→Ci);**
5: SCtarget,Windex←getscore(Windex→Ci)
6: ifnum selected+passtonex→Ctarget→T.sizethen
7: L←all tasks in Ctarget→T
8: **else**
9: L←randomly select
10: end

6. CONCLUSION

In this paper, 5W (What, Where, When, Who, and Why) model is proposed to describe the real time urban emergency event based on crowd sourcing using Weibo. After evaluated with real urban emergency cases, the 5W model shows the accuracy and efficiency.

7. REFERENCES

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