(On the Spot) Analyzing Accident Information and Claiming the Insurance

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Abstract: **There should be a system/portal for gathering of on the spot information during road accidents. This information should include photos of the site, interviews with eyewitnesses, information on injuries and fatalities, reason for accident, speed, road condition on relative basis, etc. All this data can go into a central database. This responsibility for collecting the data could be given either to police, transport authority, ambulance or even ordinary citizens who volunteer for the same. In the same system, there should also be a provision to submit/ exchange insurance numbers/ details in order to settle in order to settle the dispute if any arising out of accident.**

Keywords: **Data integration, Data consistency in reporting.**

1. Introduction

Data mining is the process of discovering patterns in large datasets involving methods at the intersection of machine learning, statistics, and database systems. Data mining is the analysis step of the "knowledge discovery in databases" process. The main objective of this system is to provide emergency service to get the accident information and reach in time. Data integration enables better & faster decision on data from heterogeneous sources and provides saving in life and time. Automobiles are very important to go to workplaces, and to deliver goods. But often they pave the way to big disasters. Road accident is most unwanted thing to happen to a road user, though they happen quite often. It has been developed to make reporting easier, provide consistency in reporting data, assess trends and ultimately contribute to injury prevention.

Road traffic accidents—the leading cause of death by injury and the tenth-leading cause of all deaths globally—now make up a surprisingly significant portion of the worldwide burden of ill-health. An estimated 1.2 million people are killed in road crashes each year, and as many as 50 million are injured, occupying 30 percent to 70 percent of orthopedic beds in developing countries hospitals.1 And if present trends continue, road traffic injuries are predicted to be the third-leading contributor to the global burden of disease and injury by 2020.To identify those occupations with the high incident of accidents and in particular handling accidents. To compare accident rates across different zones and sectors ,to monitor the effects on accident rates of any designed and operational

changes within the system ,to develop a standard coding system which could be used In setting up an accident data. This system is used in analyzing the accident and the reports are generated by the police department and the hospital department, these reports which are generated are viewed by the user or victim who claims for an insurance.

2. Related works

In this paper [Scene-Based Movie Summarization Via Role-Community Networks] which was published by Chia-Ming Tsai, Li-Wei Kang, Member, IEEE, Chia-Wen Lin, Senior Member, IEEE, and Weisi Lin, Senior Member, IEEE tells about the propose a two-stage scene-based movie summarization method based on mining the relationship between role-communities since the role communities bin earlier scenes are usually used to develop the role relationship in later scenes. In the analysis stage, we construct a social network to characterize the interactions between role-communities. As a result, the social power of each role community is evaluated by the community's centrality value and the role communities are clustered into relevant groups based on the centrality values. In the summarization stage, a set of feasible summary combinations of scenes is identified and an information rich summary is selected from these candidates based on social power preservation. Our evaluation results show that in at most test cases the proposed method achieves better subjective performance than attention-based and role-based summarization methods in terms of semantic content preservation for a movie summary. The drawback found in this paper was less performance in order to achieve the attention based and role based summarization methods.In this paper [Event Detection And Summarization In Soccer Videos Using Bayesian Network And Copula] which was published by Mostafa Tavassolipour, Mahmood Karimian, and Shohreh Kasaei, Senior Member, IEEE, includes the method includes efficient algorithms for shot boundary detection, shot view classification, mid-level visual feature extraction, and construction of the related Bayesian network. The drawback observed in this paper was less effectiveness and robustness of the proposed method on detecting these events. In this paper [Automatic Broadcast News Summarization Via Rank

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Classifiers and Crowdsourced Annotation] which was published by Srinivas Parthasarathy and Taufiq Hasan came out with an idea of a probabilistic view of the summarization ground-truth and assume that more frequently selected sentences by annotators are of higher importance. Support Vector Machine (SVM) is used as the baseline binary classifier and rank classifier. The drawback found here was proposed approach outperforms traditional binary classifiers with respect to various ROUGE summarization metrics for different summarization compression ratios (CR).In this paper [Extending Association Rule Summarization Techniquesto Assess Risk Of Diabetes Mellitus] which was published Gÿorgy J. Simon, Member, IEEE, Pedro J. Caraballo, Terry M. Therneau, Steven S. Cha, M. Regina Castro and Peter W. Li came out with an idea of Early detection of patients with elevated risk of developing diabetes mellitus is critical to the improved prevention and overall clinical management of these patients using association algorithm. The drawback found in this paper was the subpopulations identified by this summary covered most high-risk patients, had low overlap and were at very high risk of diabetes.

3. Proposed system

In proposed system, all the information about accident can be directly report to the emergency system. In this we are going to maintain a system where we can gather all the information about the spot information during road accidents. The information can be anything which can include photos of the site, interviews with eyewitnesses, information on injuries and fatalities, reason for accident, speed, road condition on relative basis, etc. The centralized server or database is maintained to store all the information. This duty regarding gathering the information could be offered either to police, transport expert, rescue vehicle or even customary subjects who volunteer for the equivalent. In a similar framework, there ought to likewise be an arrangement to submit/trade protection numbers/subtleties so as to settle so as to settle the question if any emerging out of mishap.
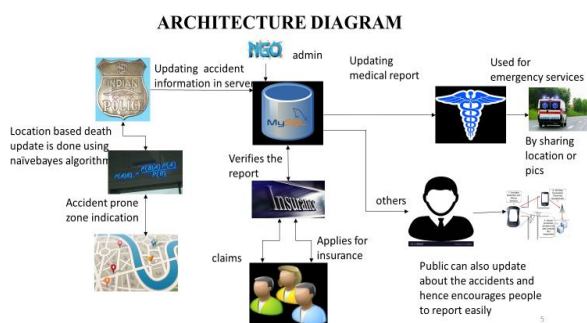
4. System architecture

Fig. 1. System architecture diagram for road accident.

A system architecture or systems architecture is the conceptual design that defines the structure and/or behavior of a system. An architecture description is a formal description of a system, organized in a way that supports reasoning about the structural properties of the system

5. Naïve bayes algorithm

A. Naïve bayes Algorithm

A naive Bayes classifier is an algorithm that uses Bayes' theorem to classify objects. Naive Bayes classifiers assume strong, or naive, independence between attributes of data points. Popular uses of naive Bayes classifiers include spam filters, text analysis and medical diagnosis. These classifiers are widely used for machine learning because they are simple to implement.

Steps:

- To mark an email as spam or not spam.
- Classify a news article about technology, politics, or sports
- Check a piece of text expressing positive emotions, or negative emotions?

$$P(c \mid x) = \frac{P(x \mid c) P(c)}{P(x)}$$

$$P(c \mid \mathrm{X}) = P(x_1 \mid c) \times P(x_2 \mid c) \times \cdots \times P(x_n \mid c) \times P(c)$$

B. Algorithm specification and system overview

This system is used in reducing the total number of accidents and resolving the disputes for claiming an insurance can be reduced by an enabling technology for data prediction analysis. Our general scope is to provide emergency services to get the accident information and reach in time. The centralized server or database is maintained to store all database. The accident data's will be collected from the different organization by the police department. The information can include a photos of the site where accident has been occurred, interviews with the eyewitnesses the person who was physically present at the place where accident has happened, and also can be the information about the injuries and fatalities, reason for accident may be over speeding, drunken driving, distractions to driver, red light jumping, avoiding safety gears like seat belts and helmets etc. Thus in this module the police department plays a major role in updating the accident report into the database. It deals with the reports that are generated by the police department and hospital department. Both the reports are updated in the server by these departments. The report that is generated by police is not as simple it includes various verification process, it involves the investigation procedure that is carried out in maintaining the accurate information regarding the accident.

Whereas secondarily the report that is generated from the

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hospital side includes the various details regarding the patient. Where it contains the details when the patient was admitted, time of discharge, what are the immediate symptoms, what are the current symptoms, what was the state of the patient when they were admitted .The doctor will update the accident medical report such as movement of client on impact, immediate symptoms, current symptoms and treatment, loss consequential to injury and at last the reviews of the medical report. The victims or user can also view the medical report which is updated from the doctor. The insurance company will then open an investigation of claim and victims may be asked to submit the accident report or independent medical examination by a doctor. Thus the end of this module secondarily deals with claiming the insurance where it is generally involves the process of claiming the insurance by verifying the reports that are generated by the police and hospital reports. This project implies claiming of the insurance that is carried out under different phases and the process of claiming the insurance is made simpler and easy to retrieve and manipulate with reports from the centralized database.
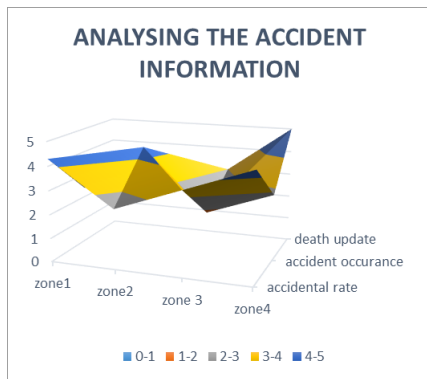

Fig. 2. Analyzing the accident information

C. Accident prediction

The casualty data analysis is the module that comprises various techniques that involves the police department to update the necessary information regarding the accident. This module generally maintains the information concerned with the report that contains the information as follows It contains the details about the accident where this accident report includes the date and time it briefly explains about when the accident has occurred where the accident has occurred.
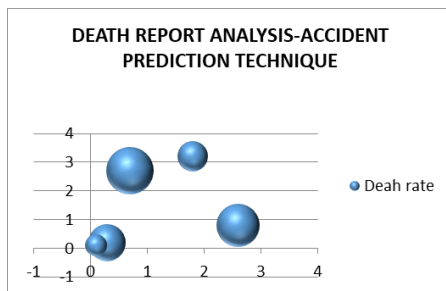

Fig. 3. Death report analysis

D. Accident detection

This accident detection technique is used in analysing the accident rate in different areas. The report which is generated is used in analysing the accident information. And finds the reason for the accident. Secondarily it is used in claiming the insurance. It is used in generating the report in accordance with the accident and contains the information regarding the death count rate and it identifies the area where the accidents have occurred frequently. It also specifies the area where the accident has occurred more so that the emergency services can be provided on time.

6. Results

This graphical method is used in providing various solutions that are limiting the accident rate. It ensures the decrease in the accident rate and also the accident report generation explains about the accident occurred in recent times and the no of people who claimed for insurance is analyzed.
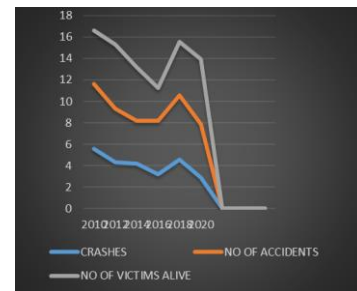

Fig. 4. Accident report generation

7. Conclusion

It is concluded that the system is to provide emergency service to get the accident information and reach in time. Data integration enables better & faster decision on data from heterogeneous sources and provides saving in life and time. Automobiles are very important to go to workplaces, and to deliver goods. But often they pave the way to big disasters. Road accident is most unwanted thing to happen to a road user, though they happen quite often. It has been developed to make reporting easier, provide consistency in reporting data, assess trends and ultimately contribute to injury prevention.

8. Future enhancements

As ongoing and future work, the data prediction shall be implemented over a large scale area. Optimizing these objective functions in the same framework is a very difficult task. There are two main challenges: first, how to formulate a problem that incorporates not only data analysis but also associates with report generation, and which addresses both total access cost and maximum access cost; and second, how to find an efficient algorithm that, if it cannot find optimal solutions of minimizing total/maximum access cost, gives near-optimal solution for both objectives.

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