
ACCIDENT SPOT DETECTION USING ANDROID

Shivani Rayate*¹, Aarzoo Mansuri*², Pooja Patalpure*³, Aarti Boarse*⁴

*^{1,2,3,4}Department Of Information Technology Engineering, Pune Vidyarthi Griha's College Of Engineering And S.S Dhamankar Institute Of Management, Nashik, Maharashtra, India.

ABSTRACT

Road and traffic is most important issue not only for Indian Government but also for common people. essentially, it is happening that the road accident are repeatedly occur in certain specific location t i.e. black spot. The survey of these project can boost to identifying definite road accident factor that make road accident happen frequently. In this project we use data mining algorithm and static analysis on the Fatal Accident dataset as try to address this issue. Association is the rule mining technique which is one of the most popular data mining techniques that identify the effect of accident of road accident. already stated we can firstly applied Eclat algorithm to group the all three accident locations which level into A,B & C level accident location. The algorithm which we use for data mining takes accident level count as a factor to cluster the locations. after this we use association mining for identify the location. The rules manifest different factors associated with road accidents at different locations. For all of this we will provide accident data that are issue from Nashik city Commissioner office. Safety driving suggestions will be making based on accident data, association rules, classification model, and clusters obtained.

Keywords: Eclat Algorithm, Clustering, Classification, Association, GPS Tracking, Roadway Fatal Accident. Analysis.

I. INTRODUCTION

To identify important factors to road accidents in Nashik we have obtained a large data set every accident recorded in the nashik district commissioner office in the Year 2014-2017. The data is currently in an unsorted and scatter format and is stored in a Microsoft excel sheet database table. Unfortunately with the data in its current for- mat, no relevant points or conclusions can be drawn. It is hoped that by applying data mining processes and techniques to the data set, relevant attributes and patterns can be established. And scientific study will also done that will helpful to government authorities and citizen. The main achievements of this project is to greater awareness of the conditions affecting road traffic accidents ,Establishing which individuals are most likely to be involved in a road traffic accident.

II. METHODOLOGY

RELEVANT MATHEMATICS ASSOCIATED WITH THE PROJECT

System Description:

Input: Nashik city road wise data set provided by commissioner officer of Nashik.

Output: Identification of black spot

Functions : —

Success Conditions: Identification of blackspots.

Failure Conditions: Foggy weather ,slippery surface, gravel roads and oily road.

Input: Nashik city road wise data set provided by commissioner officer Nashik.

Output: Identification of black spot.

Conclusion: Our system is generic hence, our system is NP-Complete.

Eclat-Algorithm

Eclat algorithm works on basis of DFS. It is very simple algorithm to find the frequent item sets. This algorithm uses vertical database. It cannot use horizontal database. Eclat algorithm scans the database only once. Support is counted in this algorithm.

1. Transform the horizontally format data into vertical format by scanning database.
2. Get TID list for each item, the support count an itemsets is the length of the TID set of the itemsets
3. The frequent k- itemsets can be used to construct the candidate (k+1)-itemsets.

4. This process repeats, with k incremented by 1 each time, until no frequent items or no candidate itemsets can be found.

III. MODELING AND ANALYSIS



Admin:

Admin add the police admin, police admin can add all black spot like crime location on map.

Police:

Police will integrate the black spot of crime's and then decide the level of crime according to admin's police decided the danger level of that spot level wise. All spots are to be declared as level wise like Level A, Level B, Level C. These levels are define by using Eclat Algorithm, using this algorithm the crime's spot will be define in above three level of dangerous zone from which people can be alerted and safely choose their path of travelling.

User:

User can integrate google map in their mobile with android application. After integrating google map user can see the crime and crime spot on that map, using these spots user can choose their root of traveling which is beneficial for them. In road travelling they also see the crime spot. All crime spot are included by the police. Police added crime black listed spot on integrated map which is help people to travel. If tourist or people reach on any crime location and they use this android application then our proposed system send voice message to people and get alert them and send information about nearby black spot on which crime which will held hence that spot is counted in black list spots.

IV. RESULTS AND DISCUSSION

Requirement Specification;

System Features:

- 1)Nashik Citizen and also useful for other city.
- 2)Ministry Of Tourism.
- 3)Ministry Of health and family welfare.
- 4)Department of health and human service(HHS).
- 5)National Mediation Board(NMB).

Software requirement:

Operating System: Windows XP and later Versions.

IDE: Android Studio V2.3.3.

Programming Language :Java ,Android.

Algorithm: Eclat Algorithm.

Hardware requirement:

Smart Phone With GPS: 3GB.

Ram: 1GB.

V. CONCLUSION

In this study, the technique of association rules with a large set of accidents data to identify the reasons of road accidents were used. Analysis appear that producing the association rules, makes identification of factors involved in the accident that occur together is easier. It shares a lot in understanding the circumstances and causes of the accident. So the association rule mining gives the direction to deeper research on the causes of road accidents. they also can helps the government to adapt the traffic safety policies with different types of accident and situations. The main result of this study is that although the characteristics of humanity and behavior are very important in occurrence of all road accidents but we can understand that spatial features and infrastructure play a major role in the accident. This article can providing useful information for highway engineers and transportation designers to design safer roads.

VI. REFERENCES

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