

CRIME MINING FROM CRIME WAREHOUSE

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ABSTRACT

The manual method of keeping and maintaining records was found to be uncontrollable. So, manual method is being progressively replaced and finally the database technology has evolved. This paper gives all information of crime along with their criminal names detail. It would be easy for the police personnels to search about any crime or criminal. All the data would be withdrawn from data warehouse.

Keywords – Crystalline Report, Dreamweaver, SQL Management Studio, VB.net, Search Engine.

I. INTRODUCTION

Historically solving crimes has been the prerogative of the criminal justice and law enforcement specialists. With the increasing use of the computerized systems to track crimes, computer data analysts have started helping the law enforcement officers and detectives. Here we will take an interdisciplinary approach between computer science and criminal justice.

In this website, we are creating a search engine basically for crime data. The tedious work of extracting the data from the files is now done by a search engine. We here are designing a website called crime mining.

This paper presents the use of the basic concepts of Visual Basic.NET to design the front end and back end of a Crime mining from crime warehouse. In Crime mining from crime warehouse there is a data base which is maintained at the data warehouse. A data warehouse is a middle store for all or main part of the data that enterprise's different business systems assemble.

Previously all the data was maintained on records manually so due to these the work was very tedious and the searching of particular record should not be easier task therefore this project help to move out from that tedious work. We can even give this to the government authorities for further implementation and use it into somewhere at important place.

Dreamweaver is a software through which the complete website is designed. Dreamweaver is all in one visual development tool to create, manage and

publish web sites. It is a proprietary web development tool by adobe systems. it can create very user friendly websites. Apart from the designing website the forms which are designed in asp.net are also hyper linked here itself.

SQL Server Management Studio (ssms) is a software application. It is used for configuring, managing, and administering all components within Microsoft SQL Server. The data base is created by using basic SQL commands. SQL is the special purpose programming language planned for managing data held in a relational database management system.

II. LITERATURE SURVEY

In the latest years, a lot of research has been done to develop games.[1] Ruilian Hou gives the Development and conception of data warehouse and database and relationship between them. [2]Fushan Wang provides a effective policy –making support for manager and provide better service along with Use of SQL server to research, design and analyze an application. [3] A Khanna studied new ways of designing and developing data warehouse architecture, algorithms and tools for bringing together some selected data from multiple data bases into one data base.[4] Lifeng Hou the data warehouse technique to build the structure of a decision assistant system.[5] Prof. Xiaohua (Tony) Hu facilitate collaboration between data mining researchers [6] Jianxiong Yang and Junzo Watada is concerned with the application of data transforms and fuzzy clustering to extract useful data.

It is important to note the literature survey for decision tree define decision tree as a judgment support tool that uses a tree like graph or model of

decision and their probable outcome include resources, cost and so on. It is nothing but a simple tree like structure used to determine what action is to be taken next.

III. DESCRIPTION

The main page that is Welcome Screen consist a basic introduction of what is this web site all about. This form is designed is asp.net. This is very first page which the user will view while using the search engine.

The Welcome screen includes the three pages-

- Admin login page
- Crime login
- Criminal login

3.1. Admin login:

This page is for access by admin of the site. There is a user name and a password which is allotted to the admin. This can be changed if needed. The admin here is allowed to change, update, insert the database by using the basic SQL queries by using SQL server 2008. This module is heart of whole system. The admin updates the database whenever there is a crime committed. The fields updated are state, city, area and state code. If state already exists then a message that 'state code already exist' is displayed

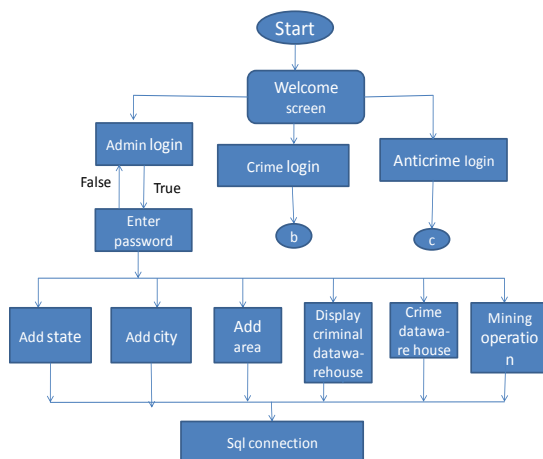


Fig.1 Main Screen

3.2. Crime login:

This module can access the database created by the admin. The data mining is performed on this module. The decision tree algorithm is applied over it. It will handle the database of crime. This will be able to see(read only) the database of crime.

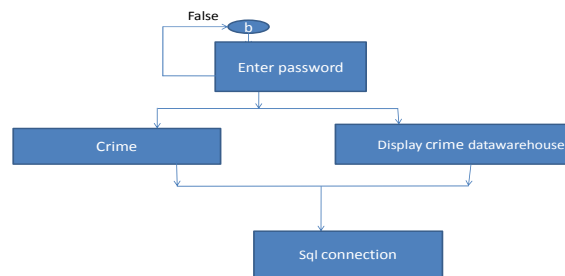


Fig.2 Crime Login

3.3. Criminal login:

This will handle the database of criminals. This will only read the data warehouse of criminal. This is updated or written by admin only

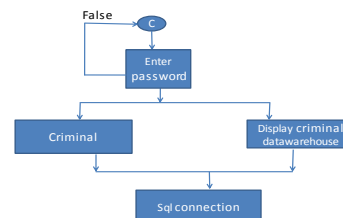


Fig.3 Criminal Login

IV. DECISION TREE ALGORITHM

In some applications of data mining, the accuracy of a forecast is the only thing that really matters. It may not be essential to know how the model works. In others, the ability to explain the reason for a decision can be essential. For example, a Marketing professional would need complete descriptions of customer segments in order to launch a successful marketing operation. The Decision Tree algorithm is supreme for this type of application. A decision tree is used as a classifier for determining an appropriate action (among a predetermined set of actions) for a given case. Consider, for example, the task of targeting good candidates to be sent an invitation to apply for a credit card: given certain information about an individual, we need to determine whether or not he or she can be a candidate. In this example, information about an individual is given as a vector of *attributes* that may include sex (male or female), age, status (student, employee, or unemployed), college grade point **average (GPA)**, **annual income**, **social security number**, etc. The allowed actions are viewed as *classes*, which are in this case to offer or not to offer an invitation. A decision tree that performs this task.

A Basic Tree Construction Procedure

Let $S = (X_1, c_1), (X_2, c_2), \dots, (X_k, c_k)$ be a training sample. Constructing a

decision tree from S can be done in a divide-and-conquer fashion as follows:

Step 1: If all the examples in S are labeled with the same class, return a leaf labeled with that class.

Step 2: Choose some test t (according to some criterion) that has two or more mutually exclusive outcomes $\{o_1, o_2, \dots, o_r\}$.

Step 3: Partition S into disjoint subsets $\{S_1, S_2, \dots, S_r\}$ such that S_i consists of

Those examples having outcome o_i for the test t , for $i = 1, 2, \dots, r$.

Step 4: Call this tree-construction procedure recursively on each of the

Subsets S_1, S_2, \dots, S_r and let the decision trees returned by these

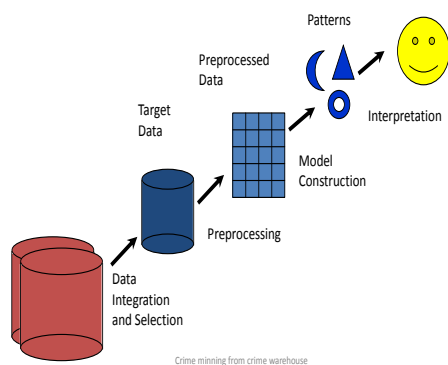
Recursive calls be T_1, T_2, \dots, T_r .

Step 5: Return a decision tree T with a node labeled t as the root and the Trees T_1, T_2, \dots, T_r as sub trees below that node.

Advantages:

The algorithm is fast, both at construct time and apply time. The construct process for Decision Tree is parallelized. Decision trees can give an overall picture of a complex topic built up by looking at one aspect at a time. A real advantage of decision trees is the flexibility of application for these simple models.

V. SEARCH ENGINE



Selection: selecting the data according to some criteria e.g.all those people who own a car;in this way subsets of the can be determined.

Preprocessing: this is the data cleansing stage where certain information is removed which is deemed unnecessary and may slow down the queries.

Transformation: the data is not merely transferred across but transformed in that overlays commonly used in market research. The data is made usable and navigable.

Data mining: this stage is concerned with the extraction of patterns from the data. A pattern can be defined as given set of facts, a language and some certainty measures.

Interpretation & evaluation: the patterns identified by the system are interpreted into knowledge which can then be used to support human decision-making.

Generating a crystal report: Crystal Reports brings the ability to create interactive, presentation-quality content to the Windows environment. With Crystal Reports, you can create complex and professional reports in a GUI-based program. Then you can connect your report to almost any database source, as well as to proxy data, such as a result set With the wizards included in the GUI designer, you can easily set formatting, grouping, charting, and other criteria.

VI. CONCLUSION

By using the above algorithm we can easily search and handle our large databases. All the records will be searched in no time, all the user has to do is type name or case which is to be searched and all the data and similar cases will be shown on output screen. This will not only minimize time and efforts taken by personals to search a record but also will be easy to maintain. It will be way easier to search, delete, and enter new records. This will not only reduce man power required but also a lot of time is saved. This kind of database is more easy, sophisticated. This paper not only highlights the effective technique for managing the database of police records but also how to get most out of it.

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