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Importance 0f Data Mining In Higher Education System

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Abstract: *Data Mining is a process to extract information for developing significant relationship with variables stored in large data warehouses. Education is an essential element for the progress of country. Educational data mining is a discipline processes to developing methods for exploring the unique type of data from educational settings. Those methods are used to better understand students and the settings which is defined by the educational data mining. Mining in educational environment can processing data is called educational data mining. Developing new methods to knowledge discover process from educational databases systems. This educational data mining provides a set of techniques to help educational system. The objective of this research is to introduce educational data mining in describe step by- step process using technique of K-means Clustering methods. In this evaluation factors students are like to write mid-term exams and final exams assignments. This study will use to help the teacher to reduced drop-out ratio to a significant level and improving the performance of students.*

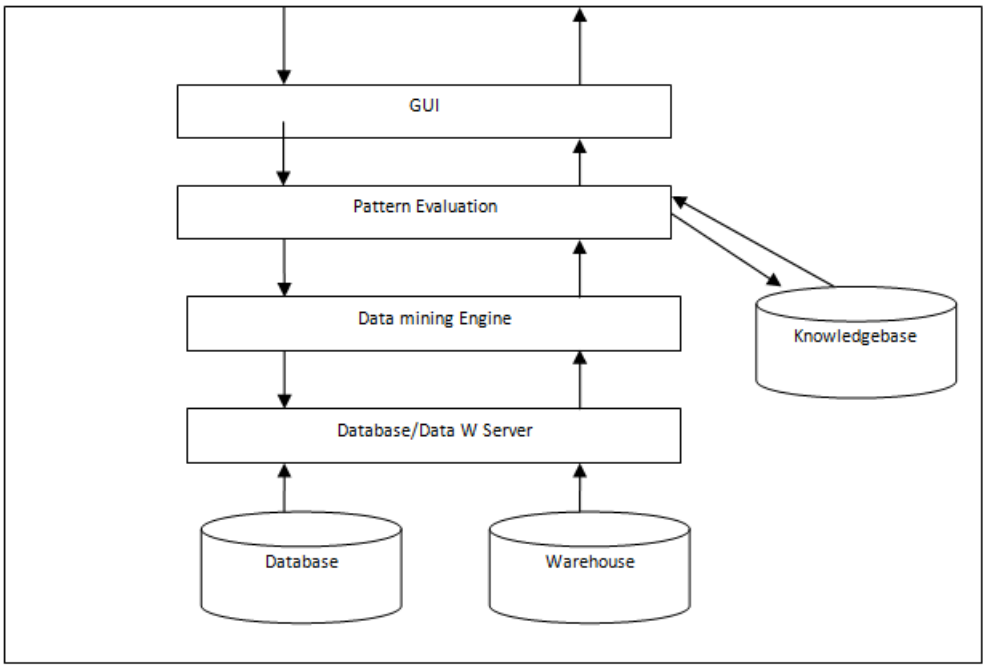
Keywords: *Data Mining, Educational Data Mining, K-Means, Clustering, Higher Education System.*

I. Introduction

Data mining is a process to discover knowledge from data which the stored in data base and data warehouses responsibility. Educational system face several issues may be including students marks like pass, fail and percentage to identify their data. Educational data mining (EDM) system used to improve the students marks in the several techniques like clustering. The mining process is use to educate or identify a student in the high, medium and low. This k-means clustering method uses process to develop the student mark and percentage in centred values. Data mining in higher educational system denote the mining process of data in a data warehouses like hierarchies, partition categories, sampling large data bases. Grade system requires the high, good, poor and low, medium. Education system uses a issues to identify students need, performance and training of quality interactions. EDM is a process used to increase the student percentage and profits. Also improve the learning process in mining data. Large data analysis is a manual process to automatically provide the student performance in a data to provide a profit values. User to allow the data from different dimensions relationship during mining processes.

1) Data Mining Higher Education System

Education is an essential process for the better and progress of a country. It enables the people of a country civilized and well manners. Mining in educational environment is also known as Educational Data mining, with developing new methods to discovering knowledge from educational databases in order to analyze student's trends and behaviours in mining towards education. Lacks of data deep and enough knowledge in higher educational system may prevents system management to achieve quality objectives, data mining methodology can help bridges this knowledge gap in higher education system.



2)K-MEANS Clustering

Data mining allows the user to analyses data from different dimensions categorize it and summarize their relationship. Identify during mining process. Data mining process to operate on techniques large volume of data to discover pattern and relation in decision process making. Techniques used to different data mining in fields of education. A large set of data uses a segment to analysis data in to subsets. Cluster is a collection of data in similar order to object placed within the same clustering. But dissimilar to objects in other process of cluster. Analyzing the data sets in basic clustering in diagram the most important technique to cluster the GUI, Pattern Evaluation, Data mining engine, knowledge database, data W server and warehouse. In educational data mining the cluster has been grouped in to student according their behaviours.

III. Implementation Mining In Educational System

In educational data mining the k-means clustering can propose data and get valuable information.

1. Design

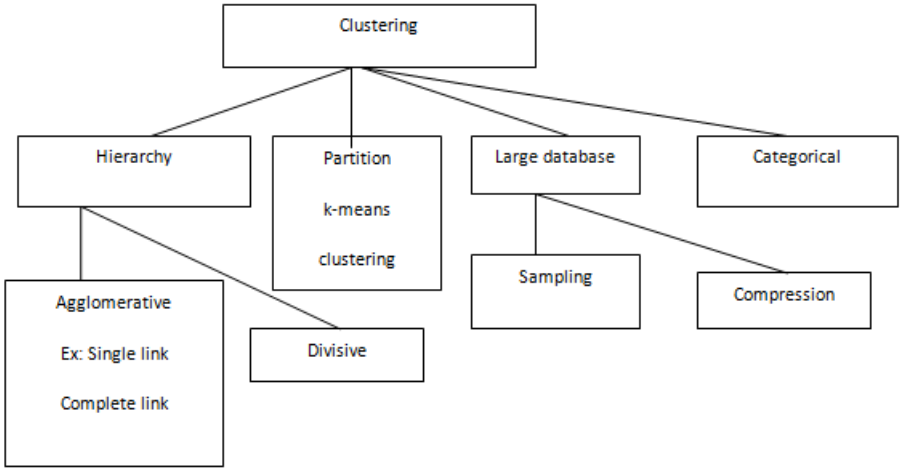
Educational data mining has storing data in different tables to join single table. After mining each data has joining process error were removed. This model can provide the pass and fail ratio or percentage of student in performance of exam.

2. Algorithm For K-Means Clustering

1. Select K points as the initial centroid
2. Repeat.
3. From K- cluster by assigning all points to the closest centroid.
4. Recomputed the centroid of each cluster.
5. Until the centroid don't change.

3. Application Data

Data can be gathered from students to analyzed using a data mining techniques such as k-means clustering. This data set used in the high, medium and low marks of students. Application data use for storing data in a data warehouse. Percentage of student in a class can process the data within classes of object such as first class, second class, pass class, higher secondary class, first class with distinction and fail ate the data can stored in a data mining system.



Number and percentage of students regarding to class to obtained

class	Marks	No.Of.Students	Percentage
Pass class	40<Percentage<50	14	11.67
Second class	50<Percentage<55	23	19.17
Higher second class	55<Percentage<60	17	14.17
First class	60<Percentage<70		
First class with distinction	70>=	13	10.83
Fail	>40	6	5

Number of students regarding classes in data

Class	No.Of.Students
High	13
Medium	87
Low	20

Percentage of students

Class	Marks	No.Of.Students	Percentage
Passed	>=40	114	95
Failed	<40	6	5

Graphical presentation of results is shows as follows

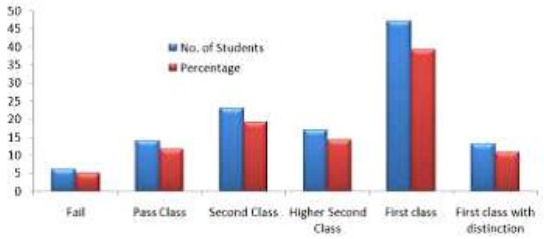


Fig: Number and percentage of students in a data.

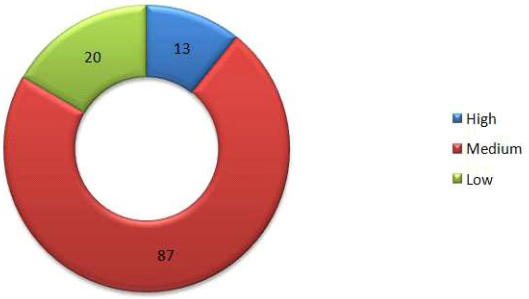


Fig: Percentage of students in a data

III. Conclusion

Data mining process can be used in a mining process to develop the student database using k-means clustering algorithm to improve the student knowledge in the result of data set table. Implementation of data mining educational system can use to help the data instruction set in a student database system.

Future Work

This paper defines the data to be more valuable for students. Important of data mining in higher education system can improve the student knowledge in the marks, percentage and set of data. Also for student improving their learning process. Student can develop their knowledge within a data.

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