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REVIEW PAPER ON PREDICTING STUDENT PERFORMANCE USING DATA MINING TECHNIQUES

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Abstract:-

We are going to propose the system by using which the user can give a test on specific educational or subject categories. When he / she complete the test, system will calculate the performance of the user by using the algorithm decision tree. The system will suggest to the teacher that on which topics the user is weak or need to study again. To solve the problems faced with manual examination writing, there is need for a computerized system to handle all the works. We propose a web based application that will provide a working environment that will be flexible and will provide ease of work and will reduce the time for report generation and other paper works. Today many organizations are conducting online examinations worldwide successfully and issue results online but they are not measuring the performance of the student and teacher not know about the weak points of the students and we are focusing on this issue. The main advantage is that it can be conducted for remote candidates and evaluation of answers can be fully automated for all questions and other essay type questions can be evaluated manually or through automated system, depending on the nature of the question's and the requirements.

Keywords:- Decision Tree Algorithm, Naïve Bayes Algorithm, Support Vector Machine

I .Introduction

Thus the purpose of the site is to provide a system that saves the efforts and time of both the institutes and the students. Online Exams System is a web application that establishes a network between the college and the students. Institutes enter on the site the questions they want in the exam. These questions are displayed as a test to the eligible students. The answers enter by the students are then evaluated and their score is calculated and saved. This score then can be accessed by the institutes to determine the passes students or to evaluate their performance. Online Exams System provides the platform but does not directly participate in, nor is it involved in any tests conducted. Questions are posted not by the site, but users of the site. The site requires an institute to register before posting the questions. The site has an administrator who keeps an eye on the overall functioning of the system. The site gets revenue by charging the institutes each time they want to conduct the exam. The growth of Information and Communication Technology has significant effects on all people around the world. With this growth, people are able to connect with each other, especially through the Internet.

II. Literature Survey

[1]. Classification is one of the most researched questions in machine learning and data mining. A wide range of real problems have been stated as classification problems, for example credit scoring, bankruptcy prediction, medical diagnosis, pattern recognition, text categorization, software quality assessment, and many more. The use of evolutionary algorithms for training classifiers has been studied in the past few decades. Genetic programming (GP) is a flexible and powerful evolutionary technique with some features that can be very valuable and suitable for the evolution of classifiers. This paper surveys existing literature about the application of genetic programming to classification, to show the different ways in which this evolutionary algorithm can help in the construction of accurate and reliable classifiers.

[2]. This study presents a learning behaviour diagnosis system to study students' learning status from learning portfolios. The proposed linking layer enables the proposed system to work on various e-learning platforms without reprogramming. Additionally, the use of a supervisory agent enables teachers and students to obtain their learning status or information provided by the proposed system in both Web and e-mail. Furthermore, the computer engineering curriculum operating systems was adopted to evaluate the proposed system. Evaluations of confidence between learning status and learning achievement yield positive experimental results.

[3]. Data mining techniques are applied in higher education more and more to give insights to educational and administrative problems in order to increase the managerial effectiveness. However, most of the educational mining research focuses on modeling student's performance. In

this paper, data mining is utilized to analyze course evaluation questionnaires. Here, the most important variables that separate "satisfactory" and "not satisfactory" instructor performances based on students' perception are found. Hopefully, these can help instructors to improve their performances. In addition, irrelevant variables that do not differentiate "satisfactory" and "not satisfactory" instructor performances are also listed. Different dimensions of course and instructor effectiveness are measured with course evaluation questionnaires in higher education institutions and these findings may be used to improve measurement instruments.

[4]. This paper represents the data mining techniques used for analysing pupil performance. Educational institutions contain an enormous amount of academic database containing student details. These student databases along with other attributes are taken into consideration like family background, family income, etc. It will help us by identifying promising students and by providing us a chance to pay heed and to refine those students who likely get low marks. For answer, we prepare a structure which will analyse the pupil's performance from their last performances using concepts of Data Mining under Classification. Classification Algorithms like Decision Tree, Naïve Bayes and Support Vector Machine can help us for predicting student's performance. This prediction helps parents and teachers to keep track of student's performance and provide required counselling. These Analysis also help in providing scholarship and other required training to the student. We are actually trying to enhance student's acquirement and success more effectively in a way using educational data mining techniques. It can bring the benefits & influence of novice, teachers and educational institutions. Experimental answers show that suggested procedure significantly outperforms prevailing procedure due to the misuse of family incomes and students' personal data component sets. Results of this examination can act as policy improvement technique in higher education.

III. System Diagram

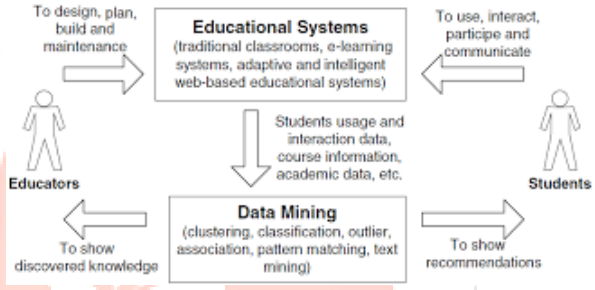

Fig : Predicting Student Performance using data mining techniques

IV. Conclusion

We concluded the proposed systems which monitor students' learning situations on a regular time schedule set by teachers. This study presents a learning diagnostic system that collects learning records of students and determines abnormal learning status of students. Each student uses the e-learning system, and their actions are recorded in a database to be analyzed. Data mining function modules, such as the Bayesian approach, cluster, decision tree, etc., will be imported into the proposed system according to teachers' need in the future.

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