Student Performa on Click

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ABSTRACT

The data in education sector is increasing day by day due to which educational data mining emerged to develop methods for exploring the unique types of data that come from educational settings, which can be helpful for the student who are at the risk of failure and provide proper guidance to improve their overall percentage of results. In this system we are going to use the concept of data mining for predicting students performance based on their academic record, extra-curricular activities and other details, using this details system will be able to assign grades to students like A, B, C, D and using this grades students at risk will be notified and proper guidance to those will be given by the teacher and also best student will be shown. For all this we are going to apply Naive bayes classification technique on student's data.

Keywords: *Data Mining, Knowledge Discovery in Database, Classification, Decision tree method.*

I. INTRODUCTION

Data in education system increases day by day which can be used to predict the performance of the students in the upcoming semesters. The quality of education is judged by the success rate of student's and which has a direct impact on the work force being provided to the industry and hence directly affects the economy. Manual system which is followed in many colleges is really time consuming because this system involve to many entries which are filled manually and also are not having centralized storage of such information. Rather than having such data we can utilize this stored data by making some changes in its representation which will lead easy retrieval of data, increases security and saves time. So this stored data will effectively use for increasing student's performance, like we can maintain results, extracurricular record and other details which are possible. By using this detail of students we can predict their performance. This predicted performance will be communicated to students which will help them to improve their performance, not only this but also all data will be centralized and teachers are able to monitor this data. To provide all this we are going to use naïve bayes theorem.

II. LITERATURE SURVEY

In [1], paper author identified that Data Mining approaches in educational sector can be organized according to six functionalities of student like student behavior , assessment of marks; student performance ,student feedback, student support ,they mostly focusing on academic performance of student. They divide the data mining approaches in educational systems, disciplines, tasks, methods, and algorithms.

Romero and Ventura, "Educational data mining in [2] surveyed that data mining can be used in traditional educational systems. They came to conclusion that to make educational data mining become a mature area more work is needed.

Romero and Ventura in,"An Empirical Study of the Applications of Data Mining Techniques in Higher Education" specified the list of areas in which data mining can be applied in higher educational sector [3].

Frawley, et.al. in, "Knowledge Discovery databases: An overview" explained that the main characteristic of data mining is, it subsumes Knowledge Discovery (KD) which is a non-trivial process of identifying valid, novel, potentially useful and ultimately understandable Patterns in data processes, thereby it contributes in predicting trends of outcomes by profiling performance attributes that ultimately supports effective decisions making. In This paper they deployed theory and practice of data mining as it relates to student's performance in their qualifications [4].

Varsha et.al. in [5] applied four classification methods on student academic data i.e. Decision tree (ID3), Multi layers perceptron, Decision table and Naïve Bayes classification method for predicting student performance.

III. EXISTING SYSTEM

Education System generate the tremendous amount of data which is not properly store in college level and ultimately of no use. Data collection is manually done in colleges and also it is scattered among teachers, so each time while anyone want this data they have to contact to the related teacher for data of course that will be time consuming.

It is required to predict whether the student will be recruited or not, in a campus drive. If the prediction states that a student failed to get job then additional efforts or counseling will be offered to improve his/her behavior, communication and few other aspects. There are other systems available which provide this facilities using decision tree algorithm but those system requires more time for predicting the performance. In various studies it is observed that naïve bayes work better than other algorithms. So in proposed system we are going to use naïve bayes algorithm.

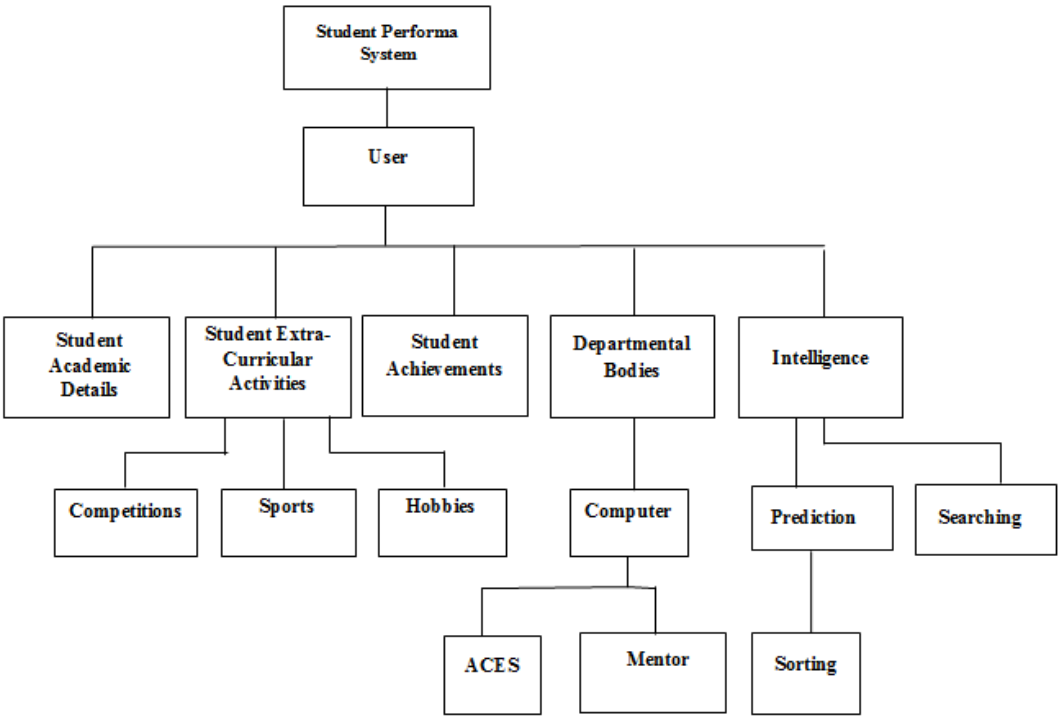
IV. PROPOSED SYSTEM

In our system we are going to accept the students personal information from student by allowing him/her to fill the form along with the different extracurricular activities he/she has participated will be recorded by allowing him/her to upload their certification details winning, participated etc. So the manual task of collection will be reduced .Authorization is given to teacher for filling the marks of students. Also the provision for maintaining the mentee details is provided to Mentor coordinator.

So, the proposed system will store all the student related data centrally. This centrally stored data will after useful for predcting student's performance and this performance will be communicated to students. So they themselves can improve their performance or teacher can guide them for same.

For predicting the student performance we are going to use naïve bayes theorem which we take above collected some parameter as input and generate more correct prediction. Naïve bayes provides output fastly accurately.

V. SYSTEM ARCHITECTURE



A .Student Academic detail

This module contains all the academic details of student i.e. when results are announced then pdf will be uploaded in this module. So the data will be centralized and can be accessed easily whenever required.

B .Student Extra-Curricular Activities

This module contain all the record of different competitions, sport activities participated by student also it contain hobbies or interest of student like dancing, singing etc. It allows students to upload their wining and participation certificate.

C .Student Achievements

This module contain all the data related to student achievement i.e. students are able to upload certificates along with the rank in competitions. So this data can be further used for prediction.

D. Departmental Bodies

In colleges there are various departments and in that departments they have different departmental bodies for instance like computer department deal with ACES committee, civil deal with CESA committee etc. So, data which is related with this committee is available in this module. Also departments deal with mentor activities so this data also need to be organized.

Also manages the mentor data i.e. number of mentees with mentor, number of activities taken by the mentor etc

E. Intelligence

This module will be used for searching, updating and sorting a record of particular student. And prediction of student performance will be done using Naive Bayes Algorithm.

CONCLUSION

We are going to develop the system in which we will take the student's academic details, Extra-curricular activities, mentor details, departmental bodies and achievements of Student's into consideration and predict the performance of the student. The attributes of student such as academic performance, extracurricular activities and personal information are considered. The system will help to analyze the student performance and notify the student at risk. The coordinator of training and placement department of engineering colleges can use such classification model to measure or visualize the students' performance according to the knowledge which is extracted. In future, this work will be helpful for educational sector and companies. We can generate the information after implementing the others data mining techniques or methods like clustering, Predication and Association rules etc with the help of Data Mining tools on different eligibility criteria of company or industry recruitment for students.

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