DEEP LEARNING BASED PREDICTION MODEL FOR COURSE REGISTRATION SYSTEM

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Abstract

Nowadays in any educational system, selecting course by students according to their need is a challenging task. This paper proposed deep learning approach to predict the courses for the student according to their cutoff marks. The cutoff mark of student is calculated for this course prediction which analyzes the accurate course to choose for their college education. Choosing the appropriate course in any educational institution with infrastructure facilities is the major drawback in the existing system. The existing system will only give the information about the institutions. To overcome the anomalies of the existing system this system proposes the effective course registration system using deep learning based prediction model. The major technique used to predict the course is Decision Tree Algorithm. This algorithm comes under the Deep Learning Technique which comes under Artificial Intelligences that will process the cutoff mark of the student to know about the Science and engineering colleges. This algorithm will analyze the uploaded dataset of the various courses in the colleges and the facility that are providing. The student will initially register their details before logging in to the website. This application will filter the data based on cutoff mark when the student login to the homepage. This will sort out the course information on basis of their cutoff marks. The advantage of the proposed system is that the student can choose the course that they need to study with the accurate predicted data. The Arts and Engineering College are uploading the detail in admin. The BE course are CS, ECE AND EEE are available in course prediction

Keywords: *Deep Learning, Decision Tree, Deep LearningTechnique, Artificial Intelligence, Student and course Dataset.*

1 Introduction:

Deep learning has in current time place a stirring novel drift in machine learning. The notional basics of deep learning are embedded in the traditional neural network (NN) prose. However it is abnormal to more established use of NNs, deep learning accounts for the utilization of various unseen neurons and layers normally more than two as an architectural benefit mutual with novel research paradigms. Each lower-dimensional shelf corresponds to a superior perceptual altitude. This high rank of concept renders an automatic attribute set, which or else would include essential hand-crafted or bespoke features. In field such as health informatics, the making of this habitual attribute set exclusive of human intrusion has a lot of reward. For occurrence, in medical imaging, it can produce features that are more complicated and hard to detail in expressive way.
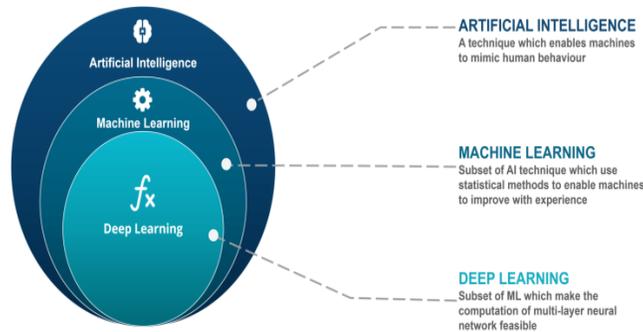
Figure 1: Deep Learning

The deep learning will give the aware of knowing the current health condition, fruit calories level and many other health details more spontaneously. This project will bring the convenience of getting the gathered information on the health care, hospital details, human body BMI and about the current vacancy available in the government sector. The course is available in CSE, ECE, and EEE. This predicts the cut off mark is student and calculated. Which course is suitable for student are desired.

2 RELATED WORK

L.B.Romdhane et.al [1] proposed a new customer profiling model for targeted marketing. In this, author identifies the set of ordinary group of customers using Fuzzy-C-means clustering algorithm. Then further identify the customers using minimal set of attributes which use information entropy to measure the importance of an attributes. Finally back-propagation neural network model is used for building the efficient customer profiles.

J. Kovacic [2] proposed educational data mining to study how the enrolment data can be used to predict success or failure of students. The essential factors which separate successful students from unsuccessful students is identified. Classification of student success was performed using CART(Classification and Regression Tree) algorithm. CHAID (Chi square Automatic interaction detector) is also used on learner data to make a decision of successful or failure students. The authors proved that this system provides better accuracy in decision tree based classification.

Han and Kemble [3] proposed an effective method to identify the student's performance at end of every semester using past student data sets.

The data set contain both personal and academic attributes such as attendance, class test, seminar and assignment marks.

Bharadwaj and Pal[4] analyze the student's performance by selecting finite number of students from various degree college conducting CSE(Computer Science Engineering) course of ECE(Electronic Communication Engineering) in India. Here the author used Bayesian classification algorithm to identify the students' grade in examination. Student's location, medium of teaching, mother's qualification, family annual income and so on are associated with the learner academic performance.[17]

Hejaz and Naive [5] review the student's performance by randomly selecting set of students from different group of colleges affiliated to particular university The statement that was include as "Student's approach towards attendance in class, hours spent in study on daily basis after college, students' family income, students' mother's age and mother's learning are considerably related with student performance" was framed. The way of mother education and student academic performance is calculate the

straightforward linear regression analysis.

Z. J. Kovacic[6.] gave a case study on schoolwork that use student past data to identify their learning behavior which predict the students results and give alert to the student about their risk before their end semester examinations. [18]In this system three different data mining classification techniques such as K-nearest neighbor, decision tree and naive bayes are used to analyze the datasets. K-nearest neighbor classification and regression methods are used to pattern reorganization and decision tree are used to build the good decision. But the KNN algorithm is lazy algorithm, where the functions are only locally approximated and also in that need to determine values of parameters of previous neighbor.

Z. J. Kovacic[7] developed an efficient algorithm for predicting the course with the help of result. They introduced new algorithm for course identification and prediction by using Artificial Intelligence techniques. An algorithm is course classification and prediction (DIP) it is mixture of decision tree and association rule. This is used for doing prediction of some course in particular area. Also it is shows the relationships between the different parameters of course.

Sembiring S et al. [8] proved that how different data mining techniques act as effective tools for identify and analyze the student performance. The author studies further and proved how data mining is particularly useful in education system to predict the final student's performance. Here the required data is collected by author using survey. This helps to find the association between attitude behavior of student and their academic performance. [19]Data mining techniques had been applied. The author used decision tree algorithm to identify the classification rule and support vector machine model is used to predict the final grade of the students. Here clustering the students into different groups using kernel k-means clustering also performed. His study shows the effective associative relation between behavior of student and their final academic performance.

Ogunde A. O, et al. [9] applied Iterative Dichotomiser 3 (ID3) decision tree algorithm for predicting the student's academic result. This model had shown a prediction accuracy of nearly 80%. The author proposed various decision-tree model to compare similarity analysis from multiple data set to obtain efficient results.

HashmiaHamsa,[10] suggested effective academic performance model to obtain the student's academic grade and risk of students Here decision tree algorithm and genetic algorithm with fuzzy logic was applied. In this model, many factors such internal assessment marks, attendance, overall percentage of marks etc. are considered to predict the student's academic result in any graduate. Student's success is measured using decision tree algorithm which provides risk factors of many students. Similarly genetic algorithm with fuzzy logic provided many successful students by considering by assuming risk factors of the students. [20]

3 PROPOSED METHOD
3.1 PREVAILING METHODS

In the existing system the student and the parent is need to analyze the colleges by the manual effort. Existing system will give only minimum accuracy in predicting the data. Variation in selecting course is not defined. Reorganization of various courses is not defined manually. Normally in any study route student take entrance they try to manage with the entire +

+struggle by themselves. They give assessment where also they pass or fail. Due to this stress of receivingsuperior result they get covered under studies and when they don't get preferred result for a moment this can lead to self-harm. As at the present a day's student self-harm rate is rising day by day

quickly this is due to growing competition between students and growing complexity of learning. Except institutes can assist student and can also reduce this self-harm rate and take away study weight from student by the use of knowledge i.e. Data removal .Data mining has many uses in many fields and is a part computer science world whose use is increasing day by day.

DISADVANTAGES

• Selecting the major to study for not better

• Accurate information providing

• Reduce the manual effort and time

• Increase in prediction of the data

3.2 ALTERNATE SOLUTION

In the proposed system the Decision Tree algorithm which comes under Deep Learning is used to predict the courses using cutoff marks. It is used to sort out the student that which category belongs to on the basis of obtained cutoff marks. This proposed system will categorize the major which the student selects to study more and the reason for choosing. Instructive organizations are very crucial part of our civilization and play an important role for enlargement and growth of any nation. Edifying data mining is the request of data mining. It is a budding interdisciplinary investigate area that deals with the expansion of method to walk around data originating in a learning context. The main objective of this proposed system is to apply data mining methodologies to analyze the students' performance in the particular course. Data mining provides different tasks that could be used to study the student cut of mark performance. In this investigate, the categorization task is used to assess student's presentation and as there are many approach that are used for data arrangement, the decision tree technique is used here. Information like course detail, post information, mark prediction were collected from the course prediction system, to predict the performance at the end of the semester. This project investigates the accuracy of Decision tree techniques for predicting student course prediction. The admin cannot find out students abilities and their interest easily so that they can enhance them in it. The impact is it helps us from fulfilling assignment and vision of the organization. If the project gets successful then it will be great help for faculty to enhance education system.

ADVANTAGES

• Prediction of student course selections has an essential quality pledge and profitable incentive.

• An approach to predicting student course selection compared on historic data is accessible.

• Selecting the major to study for the better prediction course.

• Accurate information providing

• Reduce the manual effort and time
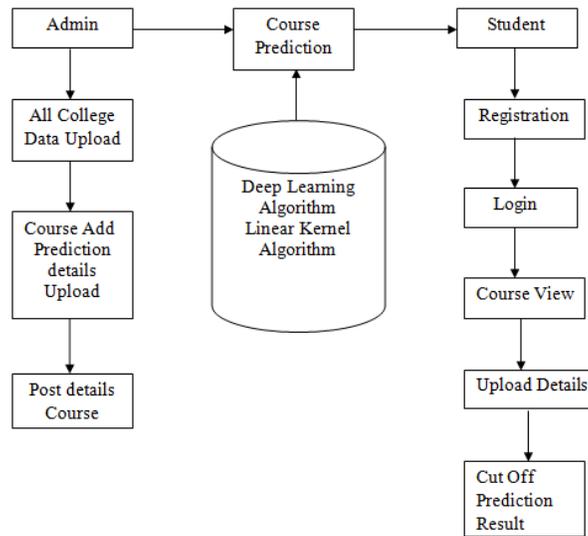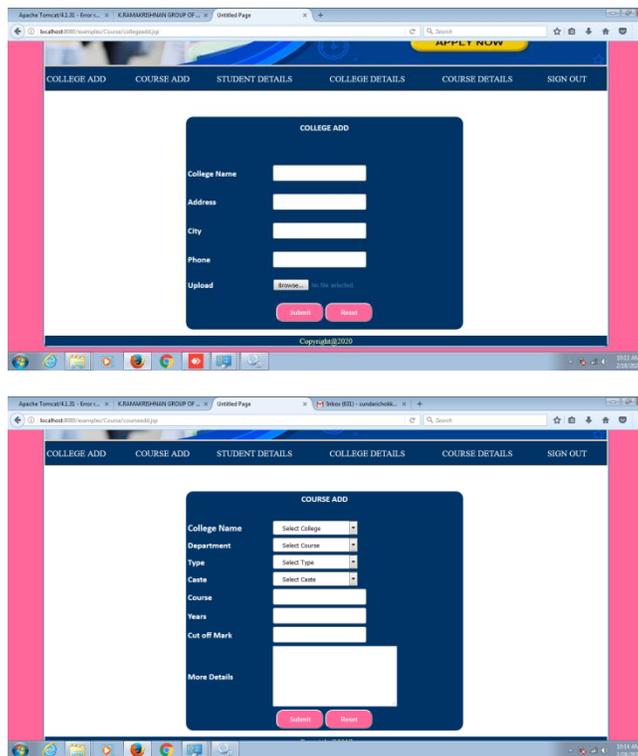
• Increase in prediction of the data

Figure: 1 ARCHITECTURE DIAGRAM

IMPLEMENTATION RESULTS

CONCLUSION

Student cutoff based allot the course of student in the world today, suffer from a variety of college department. This source reviews are good. The appropriate algorithm is used to predict the course. Cognitive ability is filtered some deep learning technique. The deep learning algorithm is used by allot the student course in our cutoff marks. The accuracy is been computed and the alert notification is been displayed with these deep learning algorithms. The objective of system is fruitfully achieved by generate consequence analysis description and predicting complexity level of subject for student. Required manpower and time consuming problems are solved by system. The system helps students to achieve success in educational system. It will enable to identify the students in advance who are likely to fail and allow the admin to provide appropriate inputs. This project can be with no trouble used by academy for generating result study report. This system is user friendly and generates reports very fast.

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