Use case tittle : University Admit Eligibility Predictor

Technology : Applied Data Science

Domain : Data Science

LITERATURE SURVEY - 1

Kruthika.et.al(2021) proposed a **University Admission prediction** using Machine learning that addresses the AI models to anticipate the opportunity of an understudy issue is vital in educational institutions. Their proposed system helps to understand the events ahead of the time and get an opportunity to get acknowledged. The system has used Machine learning models are linear relapse , Decision tree regression and random forest regress or. The main advantage of the proposed system is that it also focuses on the advanced education both M tech and MBA entrance examination and for the colleges which are available abroad .The disadvantage of the proposed system is that it does not focus on the undergraduate programs.

LITERATURE SURVEY - 2

Vandit Manish Jain.et.al(2021) proposed a **College admission prediction** using ensemble machine learning models that can help students to pick the right universities based on their profiles. The system also has a wide variety of dataset containing information about the student profile and university details with a field detailing if the admission result is positive or not. Among many of the algorithms Ensemble machine learning and the predictions have been used compared with KPIs. The main advantage of the proposed system is that it can predict the acceptance rate to a university. And it has a portal which filters and then provides a list of universities that fall into the particular profiles acceptance range. They focus on the advanced education for MS, M tech and MBA entrance examination within India and also for the colleges which are available abroad.

LITERATURE SURVEY - 3

Annam Mallikharjuna Roa.et.al(2018) proposed a **College admission predictor system** which is a web based application.They developed a system in which students can register their marks along with their personal information which helps in prediction with admission in colleges.Administrator can add the college details and the batch details. Using this Application, the entrance seat allotment becomes easier and efficient. The main advantage of the project is the computerization of the entrance seat allotment process. Administrator has the power for the allotment. Admin can add the allotted seats into a file and the details are saved into the system. In which students can register with their personal as well as marks details to predict the admission in colleges and the administrator can allot the seats for the students. Administrators can add the college details and the batch details.Their proposed System helps the entrance seat allotment become easier and can be implemented using the system. Admin can add the allotted seats into a file and the details are saved into the system. The total time for the entrance allotment became lesser and the allotment process became faster. It helps students make decisions for choosing the right college.The disadvantage of the system is that the administrator has the power of the seat allotment.

LITERATURE SURVEY - 4

Chithra Apoorva D A.et.al(2020) proposed a **University Admission prediction** using Machine Learning.The system may also be modified to a web based application by making node -red modifications. Bayesian Networks algorithms have been used to create a decision support network for evaluating the application submitted by foreign students of the university. The main advantage was to accomplished successfully, as the system allows students to save the lot of time and money that they would spend on educational mentors and applications fees for colleges where they have less chances of getting admissions.The disadvantage of this models based solely on data from Indian Students studying Masters in computer Science in the United states, we considered only few

universities with different rankings.

LITERATURE SURVEY - 5

Jeevan Ratnakar K.et.al(2021) proposed a **Graduate Admission prediction** using Machine Learning. A comparative approach by developing four machine learning regression models: linear regression, support vector machine, decision tree and random forest for predictive analytics of graduate admission chances. Newly graduate students usually are not knowledgeable of the requirements and the procedures of the postgraduate admission and might spend a considerable amount of money to get advice from consultancy organizations to help them identify their admission chances. A decision tree algorithm based on the test attributes like GRE, TOEFL,CGPA, research papers etc. According to their scores the possibilities of chance of admit is calculated. The advantage of this model is that it has 93% accuracy.

LITERATURE SURVEY - 6

Swoop S.et.al(2020) proposed a **University Admission prediction** using Machine Learning. The system has inspired many students in their profession to pursue postgraduate studies. It is seen that there is quite a large number of students from universities in the USA pursuing Masters in the field of computer science, the emphasis of this research will be on these students. Many Colleges in the U.S follow similar requirements for student admission. Colleges take different factors into account, such as the ranking on aptitude assessment and academic record review.The main advantage of our goal is to develop a model which will tell the students their chance of admission into a respective university.

LITERATURE SURVEY - 7

Abdul Fatah S; M (2012) developed a model that can provide the list of universities/colleges where the best suitable for a student is based on their academic records and college admission criteria. The model was developed by

applying data mining techniques and knowledge discovery rules to the already existing in-house admission prediction system of the university. (Mane (2016)) conducted a similar research that predicted the chance of a student getting admission in college based on their Senior Secondary School, Higher Secondary School and Common Entrance Examination scores using the pattern growth approach to association rule mining. The performance of both the models was good, the only drawback was the problem statement was single university-centric.

LITERATURE SURVEY - 8

Mishra and Sahoo (2016)conducted a research from a university point of view to predict the likelihood of a student enrolling in the university after they have enquired about courses in the university. They used K-Means algorithm for clustering the students based on different factors like feedback, family income, family occupation, parents qualification, motivation etc. to predict if the student will enroll at the university or not. Depending upon the similarity of the attributes among the students they were grouped into clusters and decisions were made. The objective of the model was to increase the enrollment of the students in the university.

LITERATURE SURVEY - 9

Waters and Miikkulainen (2013) **GRADE system** was developed to support the admission process for the graduate students in the University of Texas Austin Department of Computer Science. The main objective of the project was to develop a system that can help the admission committee of the university to make better and faster decisions. Logistic regression and SVM were used to create the model, both models performed equally well and the final system was developed using Logistic regression due to its simplicity. The time required by the admission committee to review the applications was reduced by 74% but human intervention was required to make the final decision on status if the application.(Wanderings et al. (2014)) created a similar model to predict the enrollment of the student in the

university based on the factors like SAT score, GPA score, residency race etc. The Model was created using the Multiple Logistic regression algorithm, it was able to achieve an accuracy rate of 67% only.

LITERATURE SURVEY - 10

Sujay S (2020) proposed **Graduate Admission Prediction** using Machine learning algorithm , Python and Exploratory Data Analysis that is used to analyses and predict the possibility of a person getting an admit for graduate courses in the United States based on various libraries on a Kaggle dataset. This can be done by implementing the Linear Regression which is one of the famous statistical methods in linear algebra. After implementing immense research on the dataset, explore the relationship between each factor which contributes in one or the other way to get an admit. The dataset used contains labelled data. The supervised machine learning algorithm is used for predicting labelled data. The model trains on the data in the dataset and then predicts the data from the user.Finally, using linear regression, allows the program to predict the data from the user.

LITERATURE SURVEY - 11

Insane El Guabassi.et Al(2021) developed a A Recommender System for **Early Predicting University Admission** using four Machine Learning algorithms namely Linear Regression, Decision Tree, Support Vector Regression, and Random Forest Regression that allows to reduce the human error probability by providing very strong recommendations, predictions, and decisions based on only the input data. The experimental results showed that the Random Forest Regression is the most suitable Machine Learning algorithm for predicting university admission. Also, the Cumulative Grade Point Average (CGPA) is the most important parameter that influences the chance of admission.

LITERATURE SURVEY - 12

Am al AlGhamdi.et Al(2020) developed a **Graduate Admission Prediction** by using Machine Learning approach to automatically predict the possibility of postgraduate admission to help graduates recognizing and targeting the universities which are best suitable for their profile that three learning strategies of regression to predict the university rate given the students' profile; namely, linear regression, decision tree, and logistic regression model.These models select the best model in terms of the highest accuracy rate and the least error. Logistic Regression model shows the most accurate prediction in our experiments. Employing this model to predict the future applicant's university chance of admission. The advantage of the model is giving the limited number of universities that can be considered by a human consultant, this approach might be bias and inaccurate.

LITERATURE SURVEY - 13

Prince Golden.et Al (2021) developed a model that can provide a list of universities/colleges where a student is best suited based on their academic record and college admissions criteria. The system can also be adapted to a web application by making node - red modifications. Bayesian Networks algorithms were used to create a decision support network for evaluating applications submitted by international university students. Newly graduated students are usually unfamiliar with graduate admissions requirements and procedures, and may spend significant amounts of money seeking advice from counsel ling organizations to help them identify their chances of admission.

LITERATURE SURVEY - 14

Dr. Arunakumari B.et Al (2021) developed an **Automated Web Application Prediction Model** for a college admission system that can be used for judicious college selection before the allotment.r system is developed considering K-CET. Similarly, this system can be used for the Common Entrance Tests of other states and for other entrance examinations at the national level only by changing the database used. A method that will support

an organization to explore the current scenario of student enrollment by predicting student enrollment behavior. It brings an approach like APRIORI examines a student's admissions behavior by considering the student's major and the majors he/she has chosen to enter. The method also presents a naive-b ayes data mining procedure that predicts which course a student may enroll in. Since the student's choices would be taken into account, the institution will be able to increase the admissions of the field based on the expected results.

LITERATURE SURVEY - 15

Ahmed M Khedra .et Al(2012) proposed a **Hybrid Recommender System** for predicting college admission .The proposed HRSPCA system consists of two cascaded hybrid recommender working together with the help of college predictor, for achieving high performance. The college predictor algorithm uses historical colleges GPA students admission data for predicting most probable colleges. The system analyzes student academic merits, background, student records, and the college admission criteria.In addition to the high prediction accuracy rate, flexibility is an advantage, as the system can predict suitable colleges that match the students' profiles and the suitable track channels through which the students are advised to enter. The Main Advantage of this system is adaptive, since it can be tuned up with other decision makers attributes performing trusted needed tasks faster and fairly.