LITERATURE SURVEY
UNIVERSITY ADMIT ELIGIBILITY PREDICTOR USING MACHINE LEARNING

Date	19th September 2022
Team ID	PNT2022TMID53103
Project Name	Project - University Admit Eligibility Predictor

1. "A Machine Learning Approach for Graduate Admission Prediction"

AUTHORS : Amal AlGhamdi, Amal Barsheed, Hanadi AlMshjary, Hanan AlGhamdi

ABSTRACT :

With the increase in the number of graduates who wish to pursue their education, it becomes more challenging to get admission to the students' dream university.In this paper, a machine learning approach is developed to automatically predict the possibility of postgraduate admission to help graduates recognizing and targeting the universities which are best suitable for their profile.This paper discusses the application of three machine learning algorithms as a method of predicting potential university ratings to admit the students by using data from Kaggle. The various attributes in the dataset include GRE score, TOFEL score, University Rating, LOR, SOP, CGPA and Research Experience. The performance between the models: Linear Regression Model, Decision Tree Model, and Logistic Regression Model are compared in terms of the least error. The original dataset is split into training (80 %) and test (20 %) and then the three machine learning models, Logistic Regression, Linear Regression and Decision Tree model are trained to fit the training data. Then we use the trained models to predict the Chance of Admit. The performance of the models was measured through the MSE.The logistic regression model has the smallest RMSE (0.072) and thus it is concluded that Logistic Regression is the most suitable to predict the chance of admission among the three Machine Learning models.Limitations of this research is that it does not include a few factors like past work experience, technical papers, etc.

2. "Predicting Student University Admission Using Logistic Regression"

AUTHORS : Sharan Kumar Paratala Rajagopal

ABSTRACT :

The primary purpose of this paper is to discuss the prediction of student admission to university based on numerous factors and using logistic regression. It demonstrates the top contributing scores which helps the student to get admission. Data is collected and generated from UCLA Graduate Dataset. This dataset is created for prediction of Graduate Admissions from an Indian perspective. Many prospective students apply for UCLA Master's programs. The admission decision depends on criteria within the particular college or degree program. The independent variables in this study will be measured statistically to predict graduate school admission. Exploration and data analysis would allow predictive models to allow better prioritization of the applicants screening process to Master's degree program which in turn provides the admission to the right candidates.

The dataset contains the following variables: GRE score, TOFEL score, LOR, SOP, University Rating, CGPA, Research Experience and Chance of Admit. Logistic regression is used to model the relationship between a binary response variable(Chance of Admit) and a set of predictor variables. It's used to estimate the probability of the response according to the various continuous and categorical predictors.

The results of this examination appear to indicate that higher the GRE, TOEFL score then higher the admit chances. The model predicts 87.5% accuracy and can be used for predicting the admit chances based on the above factors.

3. Applying A Hybrid Model Of Neural Network And Decision Tree Classifier For Predicting University Admission

AUTHORS : Simon Fong,Yain-Whar Si,Robert P.Biuk-Aghai

ABSTRACT :

Predicting university admission is a complex decision making process that is more than merely relying on test scores. It is known by researchers that students' backgrounds and other factors correlate to the performance of their tertiary education. This paper proposes a hybrid model of neural network and decision tree classifier that predicts the likelihood of which university a student may enter, by analysing his academic merits, background and the university admission criteria from that of historical records.

The prototype system was tested with live data from sources of Macau secondary school students. In addition to the high prediction accuracy rate, flexibility is an advantage as the system can predict suitable universities that match the students' profiles and the suitable channels through which the students are advised to enter.

The model can be generalized with other attributes and perform faster when compared to using a neural network alone.

4. Design and Implementation of a Hybrid Recommender System for Predicting College Admission

AUTHORS : Abdul Hamid M. Ragab, Abdul Fatah S. Mashat, Ahmed M. Khedra

ABSTRACT :

This paper presents a new college admission system using hybrid recommender based on data mining techniques and knowledge discovery rules, for tackling college admissions prediction problems. This is due to the huge numbers of students required to attend university colleges every year. The proposed system consists of two cascaded hybrid recommenders working together with the help of college predictor, for achieving high performance. The first recommender assigns student's tracks for preparatory year students. While the second recommender assigns the specialized college for students who passed the preparatory year exams successfully. 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. Then, it predicts the likelihood university college that a student may enter. A design for prototype system is implemented and tested with live data available in the On Demand University Services (ODUS-Plus) database resources, at King Abdulaziz University (KAU). 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 system is adaptive, since it can be tuned up with other decision makers attributes performing trusted needed tasks faster and fairly.

5. A Comparative Study on University Admission Predictions Using Machine Learning Techniques

AUTHORS : Prince Golden, Kasturi Mojesh, Lakshmi Madhavi Devarapalli, Pabbidi Naga Suba Reddy, Srigiri Rajesh, Ankita Chawla

ABSTRACT :

In this era of Cloud Computing and Machine Learning where every kind of work is getting automated through machine learning techniques running off of cloud servers to complete them more efficiently and quickly, what needs to be addressed is how we are changing our education systems and minimizing the troubles related to our education systems with all the advancements in technology. One of the the prominent issues in front of students has always been their graduate admissions and the colleges they should apply to. It has always been difficult to decide as to which university or college should they apply according to their marks obtained during their undergrad as not only it's a tedious and time consuming thing to apply for number of universities at a single time but also expensive. Thus many machine learning solutions have emerged in the recent years to tackle this problem and provide various predictions, estimations and consultancies so that students can easily make their decisions about applying to the universities with higher chances of admission. In this paper, we review the machine learning techniques which are prevalent and provide accurate predictions regarding university admissions. We compare different regression models and machine learning methodologies such as, Random Forest, Linear Regression, Stacked Ensemble Learning, Support Vector Regression, Decision Trees, KNN(K-Nearest Neighbor) etc, used by other authors in their works and try to reach on a conclusion as to which technique will provide better accuracy.

6. Deep Learning in diverse Computing and Network Applications Student Admission Predictor using Deep Learning

AUTHORS : P. Nandal

ABSTRACT :

In today's era ample numbers of students pursue the education far from the home country. The United States of America (USA) is the prominent country targeted by these international students. The students pursuing education from United States of America are in bulk from China and India. In the preceding years the students from India who pursue the post graduate education from the USA has expeditiously accelerated. A tough competition is experienced by every individual applicant to get admission in their dream university as the number of international students studying in the USA has increased. Predicting admission in a university is a complex task. A huge amount of money is invested as consultancy fees to seek help from education consultants as students do not have complete knowledge of the USA universities, their requirements and procedures. The consultancy firms provide assistance in taking admission in the universities according to the profile of the student. Few websites and blogs also provide guidance to the students on the admission procedures. The current available resources are inadequate. Owing to the reliability and accuracy of these current resources, the students cannot rely upon these resources entirely. Student Admission Predictor (SAP) is developed in the proposed work using the machine learning algorithms to help the students to find the chances of getting admission to a university.