LITERATURE SURVEY

UNIVERSITY ADMIT ELIGIBILITY PREDICATOR

A various methodologies that are all user are discussed as follows

BERAT UJKANI [1]: The Matura exam is the final national examination that high school students in many countries must pass to be eligible for admission to a university. This paper discusses the key factors that have the most impact in producing a reliable machine learning model for predicting students' enrollment in the university. These factors include the final grades from each high school year, Matura exam results and the university entry exam points. It should be noted that demographic factors were not taken into consideration in this study. Four machine learning (ML) techniques with a total of sixteen algorithms were implemented using the Weka software: Bayes (Bayes Net, Naive Bayes, etc.), Logistic Regression (Logistic and Simple Logistic), K-Nearest Neighbors (IBK, K Star, and LWL) and Decision Tree (J48, Random Forest, Rep Tree, etc.). According to the results, The Rep Tree algorithm performed the best with a True Positive (TP) rate of 0.902 and a False Positive (FP) rate of 0.148. The algorithm with the lowest performance was Naïve Multi with a TP rate of only 0.790. However, the range between the worst and the best-performing algorithms was 14.18%.

OMAER FRAUQ GONI[2]: Every year many students apply for graduate admission to different universities. To select an applicant, each university has different selection criteria such as GRE score, CGPA, research background, statement of purpose, letter of recommendation, university rating etc. There are some web applications as well as some consultancy services for suggesting the appropriate university based on students' portfolio. These help to give an idea which

universities should be applied for admission. But they have limitations because humans are incapable of considering all the conditions and universities. Moreover, web applications have accuracy problems. In this study, we have proposed a deep neural network (DNN) to predict the chance of getting admitted to a university according to the students portfolio. All the selection criteria are considered here to predict the chance of admission. The DNN model has been compared with existing methods in terms of different performance metrics including mean squared error (MSE), root mean squared error (RMSE), mean absolute error (MAE), R-squared score. It has shown the most promising result that includes R-squared score of 0.8538 and MSE of 0.0031. The proposed method has also outperformed all the existing methods in each benchmark

JAYASHREE KATTI[3]: For a pursuing graduate student, shortlisting the colleges could be an intense issue. College undergraduates frequently have an inclination to ponder over the chance that their profile suits the college requirements. Computer programs are exceptionally well trained and faster than humans in making decisions. Moreover, the cost of admission in a college is a lot, making it very crucial for a student that their profile gets shortlisted for a university admission. A University prediction machine learning algorithm is very advantageous for college undergraduates to choose their dream university which also matches their resume. The proposed method considers diverse variables related to the student and his score in various tests. The dataset includes LOR, GRE score, CGPA, TOEFL score, University rating, SOP, etc. Based on all these criterias, the admission to a particular university of an undergraduate will be predicted.

ABDUL HAMID M RAGAB [4]: 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 HRSPCA 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 prototype system is implemented and tested with live data available in the On Demand University Services (ODUS) 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.

HANAN ABDULLAH MENGASH[5]: An admissions system based on valid and reliable admissions criteria is very important to select candidates likely to perform well academically at institutions of higher education. This study focuses on ways to support universities in admissions decision making using data mining techniques to predict applicants' academic performance at university. A data set of 2,039 students enrolled in a Computer Science and Information College of a Saudi public university from 2016 to 2019 was used to validate the proposed methodology. The results demonstrate that applicants' early university performance can be predicted before admission based on certain pre-admission criteria (high school grade average, Scholastic Achievement Admission Test score, and General Aptitude Test score). The results also show that Scholastic Achievement Admission Test

score is the pre-admission criterion that most accurately predicts future student performance. Therefore, this score should be assigned more weight in admissions systems. We also found that the Artificial Neural Network technique has an accuracy rate above 79%, making it superior to other classification techniques considered

Abdul Majeed Inamdar[6]: In Maharashtra there are around 342 polytechnics providing 110 engineering courses wherein throughout every year approximately 90,000 to 1.5 lakhs students pass out. In addition, there are only 338 engineering colleges that provide Direct Second Year Engineering (DSE) admissions for B.E and B.Tech studies. However, the engineering admission process is hectic and more than that is to find the college according to student preference i.e stream, location, university and seat type, etc. During the admission process the students always need to check the previous years cutoff of each college by visiting numerous websites & pdf lists which certainly consumes a lot of time. In our web application we will provide cutoff prediction of each college by the dataanalysis of previous years cutoff, recommendation system for colleges listing according to student preferences, furthermore providing detailed comparison between institutions of their choice. The application is developed to bestow a personalized system so as to reduce time and ease the student's college selection process.

A.Sivasangari[7]: In the present conditions, students regularly have difficulty finding a fitting institution to pursue higher studies based on their profile. There are some advisory administrations and online apps that recommend universities but they ask huge consultancy fees and online apps are not accurate. So, the aim of this research is to develop a model that predict the percentage of chances into the university accurately. This model provides also the analysis of scores versus chance of prediction based on historical data so that students can understand whether their

profile is suitable or not. The proposed model uses linear regression and random forest algorithms but cat boost algorithm is giving highest accuracy.

Yu Hsuan Wu[8]: Recent advances of AI applications in various of industries have led to remarkable performance and efficiency. Driven by the great success of datasets and experience sharing, people are exploring more precious datasets with diverse features and longer time range. The promising reasoning information of well-curated student grade datasets is expected to assist young students to find the best of themselves and then improve their learning outcome and study experience. Through data and experience sharing, young students can have a better understanding of their learning condition and possible learning outcomes. Existing course selection systems in Taiwan which offer limited basic enrolling functions fail to provide performance prediction and course arrangement guidance based on their own learning condition. Students now selecting courses with unawareness of their expecting performance. A personalized guide for students on course selection is crucial for how they structure professional knowledge and arrange study schedule. In this paper, we first analyzed what factors can be used on defining learning curve, and discovered the difference between students with different properties and background. Second, we developed a recommendation system based on great amount of grade datasets of past students, and the system can give students suggestions on how to assign their credits based on their own learning curve and students that had similar learning curve. The result of our research demonstrates the feasibility of a new approach on applying big data and AI technology on learning analysis and course selection.

Sashank Sridhar[9]: For an aspiring graduate student, shortlisting the universities to apply to is a difficult problem. Since an application is extremely dynamic, students often tend to wonder if their profile matches the requirement of a

certain university. Moreover, the cost of applying to a university is extremely high making it critical that students shortlist universities based on their profile. A university admission prediction system is quite useful for students to determine their chances of acceptance to a specific university. The system could make use of data related to previous applicants to various universities and their admit or reject status. Earlier models of such prediction systems suffer from several drawbacks such as not considering important parameters like GRE (Graduate Record Exam) scores or research experience. Further, the accuracy reported by earlier models is also not sufficiently high. In this paper, a stacked ensemble model that predicts the chances of admit of a student to a particular university has been proposed. The proposed model takes into consideration various factors related to the student including their research experience, industry experience etc. Further, the system proposed has been evaluated against various other machine learning algorithms including other deep learning methods. It is observed that the proposed model easily outperforms all other models and provides a very high accuracy.

Haseeba Fathiya[10]: Students applying for admissions to universities find it difficult to understand whether they have good chances of getting admission in a university or not. Keeping this in focus, we have used logistic regression techniques that have gained attention in software engineering field for its ability to be used for predictions. This is a novel work on a university admissions predictor using which students can evaluate their competitiveness for getting admission at a university. This is developed by collecting real student data. The data is stored in a form of a usable training data for the logistic regression classifier developed to make admissions predictions. We have collected the data from the Internet using a Selenium web scraper. The paper intensely discusses the methods, implementation and challenges faced in the process.