IBM Team ID: PNT2022TMID21686
Team Leader: Rajalakshmi I (142219104092)
Team Members: Ranjith R (142219104097)
Sabarish M (142219104104)
Suryakumar S (142219104133)
Domain Name: Applied Data Science
Use Case Name: University Admit Eligibility Predictor

Paper 1

Authors: Abdul Hamid M Ragab; Abdul Fatah S. Mashat; Ahmed M Khedra

Year : 2012

Title: HRSPCA : Hybrid Recommender System for Predicting College Admission

Methodology: In order to achieve student college admission with high performance equitably and correctly, this research provides a novel college admission prediction approach based on employing two cascaded knowledge rules. The system examines a student's academic achievements, history, records, and college entrance requirements. The possibility that a student will enroll in a university or college is then predicted.

Advantage: The method makes recommendations for which colleges at which universities a student should be accepted, taking into account both the student's test results and other university-qualified criteria. Data from actual students was used to validate the HRSPCA system. System tests revealed that by dividing the admission chores between two cascade recommenders, the HRSPCA system works with noticeably high performance.

Disadvantage: Only 16000 of the 66000 candidates could meet the minimum requirements for a university or institution.

Paper 2

Authors: Shen Zihao, Wang Hui

Year : 2010

Title: Research on College Party's Admission Management System Based on Workflow

Methodology: This paper provides a formal explanation of the workflow model and a description of the workflow management system and its functional features. In addition to discussing the current circumstances surrounding Party's college admittance, it also creates a Petri net-based workflow model. It offers solutions for the admission management system of college Party, which meets the demand of admission, and is based on Web applications as backdrop. Good usability and adaptability in a schema have a certain importance in practical applications.

Advantage: The management of workflow nodes made it simple to adjust the business process for Party's admission, which resolved the issue of a huge job quantity, managed complicated and shifting flexibility in college Party's admission, and realised the development of management efficiency.

Disadvantage: It lacks flexibility and cannot handle sophisticated process logic. Because it is web-oriented, you need the Internet to access it. College parties are disappearing in modern times.

Paper 3

Authors: Jayashree Katti, Jony Agarwal, Swapnil Bharata, Swati Shinde, Saral Mane, Vinod Biradar

Year : 2022

Title: University Admission Prediction using Google Vertex AI

Methodology: Selecting the institutions for a short list might be a challenging task for a graduate student. College freshmen sometimes have a tendency to wonder if their profile fits the needs of the college. When making choices, computer programmes outperform humans in skill and speed. Additionally, college entrance is quite expensive, thus it is essential for a student that their application be selected for university admission.

Advantage: College freshmen can choose their ideal university that complements their resume with the help of a university prediction machine learning algorithm. The suggested approach takes into account a variety of factors relating to the student and his performance on various tests.

Disadvantage: The dataset comprises LOR, GRE, CGPA, TOFEL, University Rating, SOP, and other information. An undergraduate's acceptance to a certain university will be predicted based on all of these factors. The exam fees for all of the aforementioned exams might not be affordable for the students.

Paper 4

Authors: Zhenru Wang , Yijie Shi

Year : 2016

Title: Prediction of the admission lines of college entrance examination based on machine learning

Methodology: For applicants to complete applications and conduct pertinent CEE analyses, accurate prediction of college entrance examination (CEE) outcomes is crucial. Currently, data analytics, probability models, and a few weighted combination models are used to predict the CEE score. The study and prediction lines in this work are carried out using machine learning

techniques. In this research, the Adaboost algorithm—which is a part of ensemble learning—is specifically employed to examine and forecast. The outcome of this model is shown in the end and is superior to the current projection.

Advantage: The study and prediction lines in this work are carried out using machine learning techniques. In this research, the Adaboost algorithm—which is a part of ensemble learning—is specifically employed to examine and forecast. The outcome of this model is shown in the end and is superior to the current projection.

Disadvantage: Of However, due to the lack of extensive data, the model's establishment is not entirely accurate. And there is still plenty that can be done to improve matters. We exclusively predict the Sichuan province's college entrance test in the feature selection area. We can anticipate the university admission line if we have more data in the future. It is also a highly important piece of work.

Paper 5

Authors: Abdul Majeed Inamdar, Tanmay Mhatre, Pravin Nadar, Supriya Joshi

Year : 2022

Title: Personalized College Recommender and Cutoff Predictor for Direct Second Year Engineering

Methodology: Finding the right college for the student depends on their preferences for things like stream, location, institution, seat type, etc. The engineering admissions process is stressful on top of that. It takes a lot of time for students to visit various websites and download pdf listings in order to check the previous year's cutoff for each college throughout the admissions process. Our online application will offer cutoff predictions for each college based on data analysis from prior years' cutoffs, a college recommendation system based on student preferences, and extensive comparisons between their preferred universities. In order to save time and make the student's college selection process easier, the application is designed to provide a tailored system.

Advantage: The Project's Goal is quite clear, and the huge collection of resources accessible to them make it incredibly productive.

Disadvantage: While training, it doesn't function well for smaller sets. There are no such bigger Sets on the Web.

Paper 6

Authors: Haseeba Fathiya, Lipsa Sadath

Year : 2021

Title: University Admissions Predictor Using Logistic Regression

Methodology: It might be confusing for students seeking for university admission to know if they stand a decent chance of being accepted or not. In order to keep this in mind, we employed logistic regression techniques, which have drawn interest in the field of software engineering due to their capacity for making predictions. This is a unique study on a predictor for university admissions that allows students to assess their chances of being admitted to an institution. Real student data is gathered in order to construct this. The information is kept in a format that may be used as training data by the logistic regression classifier designed to predict admissions. We used a Selenium web scraper to gather the data from the Internet. The study delves further into the procedures, applications, and difficulties.

Advantage: The admissions predictor may be a helpful tool for students looking to narrow down their institution selections, and the web scraper saves a lot of time and lowers staff expenses.

Disadvantage: The programme may be enhanced by adding a variety of additional features. It is possible to modify the model chosen for each university to get the best outcomes given the data at hand. Other classification methods can be used in experiments to potentially increase accuracy. Test results and GPA can be combined with additional criteria to get results that are more accurate.

S.No.	Author	Title of the Paper	Methodology	Pros (Advantage)	Cons (Disadvantage)
1.	Abdul Hamid M Ragab; Abdul Fatah S. Mashat; Ahmed M Khedra (2012) **(IEEE paper 1)**	HRSPCA : Hybrid Recommender System for Predicting College Admission	In order to achieve student college admission with high performance equitably and correctly, this research provides a novel college admission prediction approach based on employing two cascaded knowledge rules. The system examines a student's academic achievements, history, records, and college entrance	The method makes recommendations for which colleges at which universities a student should be accepted, taking into account both the student's test results and other university-qualified criteria. Data from actual students was used to validate the HRSPCA system. System tests revealed that by dividing the admission chores between two cascade recommenders, the HRSPCA system	Only 16000 of the 66000 candidates could meet the minimum requirements for a university or institution.

			requirements. The possibility that a student will enroll in a university or college is then predicted.	works with noticeably high performance.	
2.	Shen Zihao, Wang Hui (2010) **(IEEE paper 2)**	Research on College Party's Admission Management System Based on Workflow	This paper provides a formal explanation of the workflow model and a description of the workflow management system and its functional features. In addition to discussing the current circumstances surrounding Party's college admittance, it also creates a Petri net-based workflow model. It offers solutions for the admission management system of college Party, which meets the demand of admission, and is based on Web applications as backdrop. Good usability and adaptability in a schema have a certain importance in practical applications.	The management of workflow nodes made it simple to adjust the business process for Party's admission, which resolved the issue of a huge job quantity, managed complicated and shifting flexibility in college Party's admission, and realised the development of management efficiency.	It lacks flexibility and cannot handle sophisticated process logic. Because it is web-oriented, you need the Internet to access it. College parties are disappearing in modern times.
3.	Jayashree Katti, Jony Agarwal, Swapnil Bharata, Swati Shinde, Saral Mane,	University Admission Prediction using Google Vertex AI	Selecting the institutions for a short list might be a challenging task for a graduate student. College freshmen sometimes have a	College freshmen can choose their ideal university that complements their resume with the help of a university prediction machine	The dataset comprises LOR, GRE, CGPA, TOFEL, University Rating, SOP, and other information.

	Vinod Biradar (2022) **(IEEE paper 3)**		tendency to wonder if their profile fits the needs of the college. When making choices, computer programmes outperform humans in skill and speed. Additionally, college entrance is quite expensive, thus it is essential for a student that their application be selected for university admission.	learning algorithm. The suggested approach takes into account a variety of factors relating to the student and his performance on various tests.	An undergraduate's acceptance to a certain university will be predicted based on all of these factors. The exam fees for all of the aforementioned exams might not be affordable for the students.
4.	Zhenru Wang , Yijie Shi (2016) **(IEEE Paper 4)**	Prediction of the admission lines of college entrance examination based on machine learning	For applicants to complete applications and conduct pertinent CEE analyses, accurate prediction of college entrance examination (CEE) outcomes is crucial. Currently, data analytics, probability models, and a few weighted combination models are used to predict the CEE score. The study and prediction lines in this work are carried out using machine learning techniques. In this research, the Adaboost algorithm—which is a part of ensemble learning—is specifically	The study and prediction lines in this work are carried out using machine learning techniques. In this research, the Adaboost algorithm—which is a part of ensemble learning—is specifically employed to examine and forecast. The outcome of this model is shown in the end and is superior to the current projection.	Of However, due to the lack of extensive data, the model's establishment is not entirely accurate. And there is still plenty that can be done to improve matters. We exclusively predict the Sichuan province's college entrance test in the feature selection area. We can anticipate the university admission line if we have more data in the future. It is also a highly important piece of work.

			employed to examine and forecast. The outcome of this model is shown in the end and is superior to the current projection.		
5.	Abdul Majeed Inamdar, Tanmay Mhatre, Pravin Nadar, Supriya Joshi (2022) **(IEEE Paper 5)**	Personalized College Recommender and Cutoff Predictor for Direct Second Year Engineering	Finding the right college for the student depends on their preferences for things like stream, location, institution, seat type, etc. The engineering admissions process is stressful on top of that. It takes a lot of time for students to visit various websites and download pdf listings in order to check the previous year's cutoff for each college throughout the admissions process. Our online application will offer cutoff predictions for each college based on data analysis from prior years' cutoffs, a college recommendation system based on student preferences, and extensive comparisons between their preferred universities. In	The Project's Goal is quite clear, and the huge collection of resources accessible to them make it incredibly productive.	While training, it doesn't function well for smaller sets. There are no such bigger Sets on the Web.

			order to save time and make the student's college selection process easier, the application is designed to provide a tailored system.		
6.	Haseeba Fathiya, Lipsa Sadath (2021) **(IEEE Paper 6)**	University Admissions Predictor Using Logistic Regression	It might be confusing for students seeking for university admission to know if they stand a decent chance of being accepted or not. In order to keep this in mind, we employed logistic regression techniques, which have drawn interest in the field of software engineering due to their capacity for making predictions. This is a unique study on a predictor for university admissions that allows students to assess their chances of being admitted to an institution. Real student data is gathered in order to construct this. The information is kept in a format that may be used as training data by the logistic regression classifier designed to predict admissions. We	The admissions predictor may be a helpful tool for students looking to narrow down their institution selections, and the web scraper saves a lot of time and lowers staff expenses.	The programme may be enhanced by adding a variety of additional features. It is possible to modify the model chosen for each university to get the best outcomes given the data at hand. Other classification methods can be used in experiments to potentially increase accuracy. Test results and GPA can be combined with additional criteria to get results that are more accurate.

			used a Selenium web scraper to gather the data from the Internet. The study delves further into the procedures, applications, and difficulties.		