Ideation Phase
Literature survey

Date	9 October 2022
Team ID	PNT2022TMID21562
Project Name	University Admit Eligibility Predictor

S.NO	RESEARCH PAPER	AUTHOR	ALGORITHM USED	DATASET	INFERENCE
1	Prediction of the admission lines of college entrance examination based on machine learning	Zhenru Wang, Yijie Shi	Adaboost algorithm is used to study and forecast, which belongs to ensemble learning.	The data were selected from 2006 to 2015 in Sichuan Province. TotalNumber: total number of indicates of CEE in province Sichuan. NumberOtKeyUniversity: enrolment plan of first batch of undergraduate. NumberOfUniversity: enrolment plan of second batch of undergraduate. NumberOfMath: the number of science students who take part in CEE. Param: difficulty of test question.	AdaBoost also called Adaptive Boosting is a technique in Machine Learning used as an Ensemble Method. The most common algorithm used with AdaBoost is decision trees with one level that means with Decision trees with only 1 split. These trees are also called Decision Stumps.
Link: https://ieeexplore.ieee.org/document/7924718					

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2	A University Admission Prediction System using Stacked Ensemble Learning	Sashank Sridhar, Siddartha Mootha, Santosh Kolagati	MULTI LAYER PERCEPTRON AND THE STACKED ENSEMBLE MODEL. The proposed model takes into consideration various factors related to the student including their research experience, industry experience etc. 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.	The dataset consists of the applicant scores such as TOEFL, IELTS, GRE, GMAT, CGPA. web crawler has been ued to extract student details from Edulix for 45 universities shortlisted. The scraped data had a total of 22 features and 50, 000 samples.	The proposed ensemble neural network is evaluated by comparing it to other supervised algorithms such as Decision Trees, Random Forest, K-Nearest Neighbor, Naive Bayes Classifier, Logistic Regression, Support Vector Machine, (SVM), Linear Discriminant Analysis and Quadratic Discriminant Analysis. Ensemble NN has the highest accuracy.
Link: https://ieeexplore.ieee.org/document/9213205					

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3	Engineering & Technology Admission Analysis and Prediction	Sachin Bhimrao Bhoite, Ajit More	Logistic Regression, K Nearest Neighbours', Decision Tree Classifier, Random Forest Classifier, Naive Bayes & Support Vector Machine Supervised Machine Learning Algorithms. Out all six models Decision Tree classifier & Random Forest always give great accuracy.	Various non-aided but affiliated to Savitribai Phule Pune University's engineering colleges admission record of academic year 2015-16 are considered. This Dataset has various attributes, which are: 'Main Serial No.', 'Sr. No.', 'College Name', 'College Code', 'Merit No', 'Merit Marks', 'Candidate Name', 'Gender', 'Candidate Type', 'Category', 'Home University', 'PH Type', 'Defence Type', 'HSC Eligibility', 'Seat Type', 'Fees Paid', 'CAP Round', 'Admitted/Uploaded Late', 'BRANCH' and 'NATIONALITY'.	Feature engineering is very essential part while implementing & building predictive models using machine learning techniques. The results have been more improved after feature engineering.
Link: https://www.researchgate.net/publication/341740217_ENGINEERING_TECHNOLOGY_ADMISSION_ANALYSIS_AND_PREDICTION					

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4	Research on Prediction of College Students' Performance Based on Support Vector Machine	Peng Wang , Yinshan Jia	Support vector machine was used to establish a college course performance prediction model, and cross-validation methods were used to obtain the best parameters and a reliable and stable model	The 2016 college computer science and technology and communication engineering students of a university were selected as the experimental data.	The prediction accuracy rate reached 73.6%. The prediction results show that the support vector machine can accurately predict college course performance based on the college entrance examination results.
Link: https://www.jncet.org/Manuscripts/Volume-8/Issue-4/Vol-8-issue-4-M-32.pdf					