Placement Prediction Using Machine Learning

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Abstract- *A placement predictor is to be designed to calculate the possibility of a student being placed in a company, subject to the criterion of the company. The placement predictor takes many parameters which can be used to assess the skill level of the student. While some parameters are taken from the university level, others are obtained from tests conducted in the placement management system itself. Combining these data points, the predictor is to accurately predict if the student will or will not be placed in a company. Data from past students are used for training the predictor.*

I. INTRODUCTION

The higher educational institutions have capacity of knowledge such academic performance of students, statistical details of students and various types of information in the hidden form. Now a day's data Mining techniques have a great importance in educational data set as it is rising daily. It is one of the computational processes that extract useful patterns or relationships from raw data. In educational field it is to increase learning process such as identifying, evaluating variables, extracting data set from the learning process. The campus placement of the students plays an important role in an educational institution. Prediction system could help in the academic planning of an institution. A placement prediction system helps students to have an idea about where they stand and what to be done to obtain a good placement. A placement predictor is a system that could predict the chances or the type of company a pre-final year student has chances to be placed. This system is necessary for predicting student's placement using Data Mining Techniques by considering the student dataset which is uploaded by TPO. This system is built by utilizing the Support Vector Machine (SVM) algorithm. In machine learning, Support Vector Machines are supervised learning models with associated learning algorithms that analyze and survey data used for classification and regression. It is simply a co-ordinate of individual observation. It's very crucial for cases where very high predictive power is required. Such algorithms are smaller harder to visualize because of the more complexity in formulation.

II. LITERATURE SURVEY

[1] "Data Mining Approach for Predicting Student and Institution's Placement Percentage", Professor. Ashok M Assistant Professor Apoorva A, 2016 International Conference on Computational Systems and Information Systems for Sustainable Solutions In this paper author has used the data mining technique for the prediction of the student's placement. For the prediction of student's placement author has divided the data into the two segments, first segment is the training segment which is historic data of passed out students. Another segment consists of current data of students, based on the historic data author has designed the algorithm for calculating the placement chances. Author has used the various data mining algorithms such as decision tree, Naive Bayes, neural network and the prosed algorithm were applied, and decision are made with the help of confusion matrix.

[2] "Student Placement Analyzer: A Recommendation System Using Machine Learning", Senthil Kumar Thangavel , Divya Bharathi P, Abijith Sankar, International Conference on Advanced Computing and Communication Systems (ICACCS -2017), Jan. 06 - 07, 2017, Coimbatore, INDIA In this paper author is concern about the challenges face by any institute regarding the placement. The placement prediction is very complex when the number of the entities increases in any institute. With the help of machine learning this complex problem of prediction can be easily solved. In this paper all the academic record of student is taken into consideration. Various classification and data making algorithms are used such as Naïve Bayes, Decision Tree, SVM and Regressions. After the prediction of the students can be placed in of the given category that is Core Company, dream company or support services.

[3] "A Placement Prediction System Using KNearest Neighbors Classifier", Animesh Giri, M Vignesh V Bhagavath, Bysani Pruthvi, Naini Dubey, Second International Conference on Cognitive Computing and Information Processing (CCIP), 2016 The placement prediction system predicts the probability of students getting placed in various companies by applying K-

Nearest Neighbors classification. The result obtained is also compared with the results obtained from other machine learning models like Logistic Regression and SVM. The academic history of student along with their skill sets like programming skills, communication skills, analytical skills and team work is considered which is tested by companies during recruitment process. Data of past two batches are taken for this system.

[4] "Class Result Prediction using Machine Learning", Pushpa S K, Associate Professor, Manjunath T N, Professor and Head, Mrunal T V, Amartya Singh, C Suhas, International Conference On Smart Technology for Smart Nation, 2017 In this paper, the result of a class is predicted using machine learning. Performance of students in past semester along with scores of internal examinations of the current semester is considered to predict whether the student passes or fails in the current semester before attempting the final examination. The author uses SVM, Naive Bayes, Random Forest Classifier and Gradient Boosting to compute the result. Boosting is an ensemble learning algorithm which combines various learning algorithm to obtain better predictive performance.

[5] "Student Placement Analyzer : A Recommendation System Using Machine © 2020 JETIR May 2020, Volume 7, Issue 5 www.jetir.org (ISSN-2349-5162) JETIR2005453 Journal of Emerging Technologies and Innovative Research (JETIR) www.jetir.org 1013 Learning", Apoorva Rao R, Deeksha K C, Vishal Prajwal R, Vrushak K, Nandini, JARIIE-ISSN(O)- 2395-4396 Now-a-days institutions are facing many challenges regarding student placements. For educational institutions it is much difficult task to keep record of every single student and predict the placement of student manually. To overcome these challenges, concept of machine learning and various algorithms are explored to predict the result of class students. For this purpose, training data set is historical data of past students and this is used to train the model. This software system predicts placement status in 5 categories viz dream company, core company, mass recruiter, not eligible and not interested in placements. This system is also helpful to weaker students. Institutions can provide extra care towards weaker students so that they can improve their performance. By use Naïve Bayes algorithm all the data will be monitor and appropriate decision will be provided

III. PROPOSED METHODOLOGIES

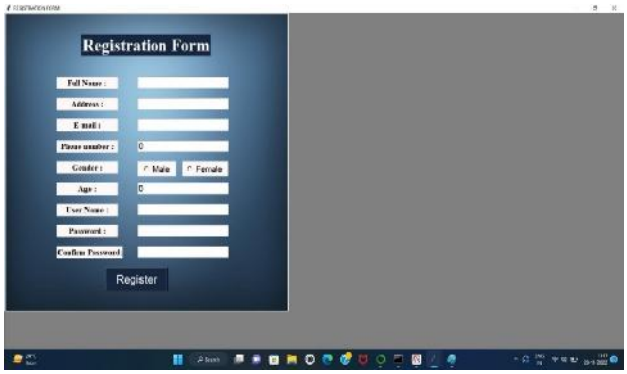
3.1 OBJECTIVES

In Placement Prediction system predicts the probability of a undergrad students getting placed in a company by applying classification algorithms such as Support vector machine algorithm . The main objective of this model is to predict whether the student he/she gets placed or not in campus recruitment.

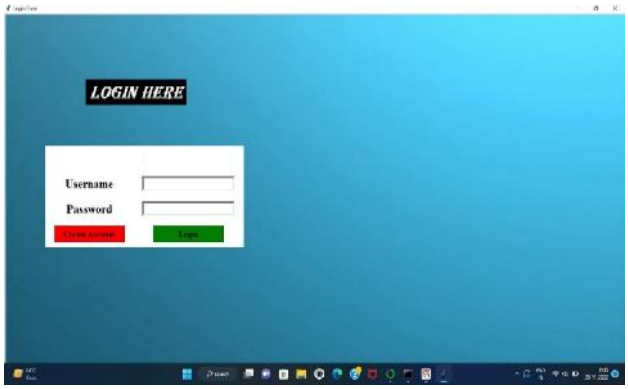
3.2 IMPLEMENTAION FIG.

- Open the first page of Placement Prediction .There are three options first is login then register and exit.

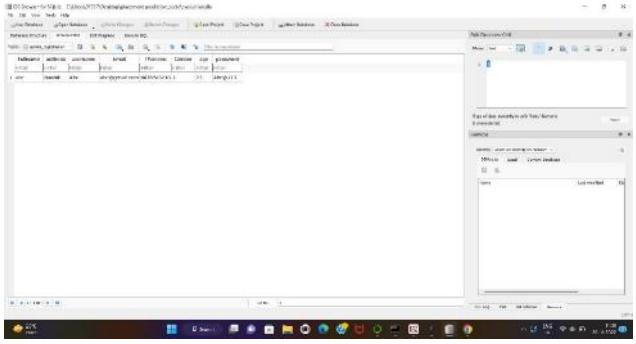
- Click on register and fill all information for registration. Then account is created successfully.

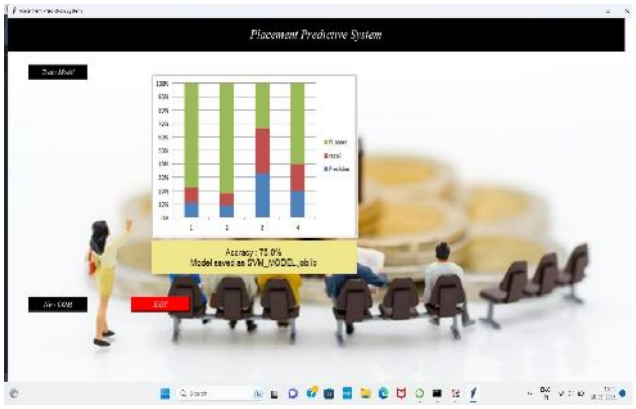


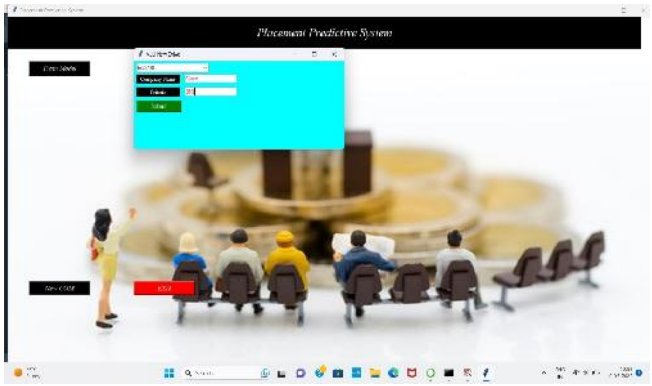
- After registration login here.



- After login you can check your data in Database.



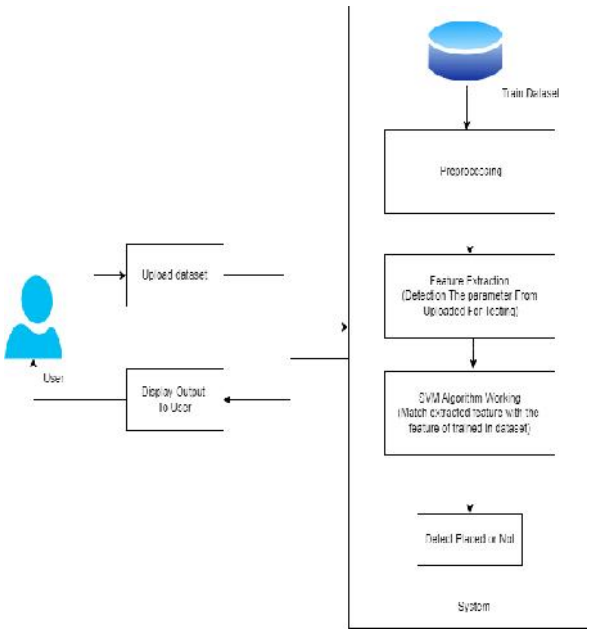




3.3 ALGORITHM USED

- Support Vector Machine Algorithm
- Support Vector Machine or SVM is one of the most popular Supervised Learning algorithms, which is used for Classification as well as Regression problems. However, primarily, it is used for Classification problems in Machine Learning.
- The goal of the SVM algorithm is to create the best line or decision boundary that can segregate n-dimensional space into classes so that we can easily put the new data point in the correct category in the future. This best decision boundary is called a hyperplane.
- SVM chooses the extreme points/vectors that help in creating the hyperplane. These extreme cases are called as support vectors, and hence algorithm is termed as Support Vector Machine.

3.4 PROPOSED WORKFLOW



IV. FUTURE SCOPE

The future enhancements of the project are to focus on adding some more parameters to predict more well organized placement. The placement prediction system predicts the probability of students getting placed in various companies.

V. CONCLUSION

TPO's manual student placement class prediction is a challenging task. Utilizing data mining, we can fix this issue and aid in the placement of students' predictions. Our recommended system uses a technique for predicting student placement that predicts a certain student's placement using algorithm: SVM

REFERENCES

[1] J. Luan, “Data mining and its applications in higher education”, New Dir. Inst. Res, 113:17–36, 2002.

[2] A.S. Sharma, S. Prince, S. Kapoor, K. Kumar, “PPS – Placement prediction system using logistic regression”, IEEE international conference on MOOC, innovation and technology in education (MITE), pp 337-341,2014.

[3] Thangavel, S.Bkaratki, P. Sankar, “Student placement analyzer: A recommendation system using machine learning”, Advances in Computing and Communication Systems (ICACCS-2017) International Conference on. IEEE, 2017.

[4] R. Sangha, A. Satras, L. Swamy, G. Deshmukh, “Students Placement Eligibility Prediction using Fuzzy Approach”, International Journal of Engineering and Techniques , Volume 2, Issue 6, Dec 2016.

[5] H. Bhatt, S. Mehta, L. R. D’mello, “Use of ID3 Decision Tree Algorithm for Placement

[6] “Data Mining Approach for Predicting Student and Institution’s Placement Percentage”, Professor. Ashok M Assistant Professor Apoorva A, 2016 International Conference on Computational Systems and Information Systems for Sustainable Solutions In this paper author has used the data mining technique for the prediction of the student’s placement.

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[10] “Student Placement Analyzer : A Recommendation System Using Machine © 2020 JETIR May 2020, Volume 7, Issue 5 www.jetir.org (ISSN-2349-5162) JETIR2005453 Journal of Emerging Technologies and Innovative Research (JETIR) www.jetir.org 1013 Learning”, Apoorva Rao R, Deeksha K C, Vishal Prajwal R, Vrushak K, Nandini, JARIIE-ISSN(O)- 2395-4396 Now-a-days institutions are facing many challenges regarding student placements.