STUDENT PLACEMENT CHANCE PREDICTION

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Abstract - All students dream to obtain a job offer in their hands before they leave their college. A placement chance predictor 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 possibility or the type of company a pre-final year student has chances to be placed. Thus a prediction system could help in the academic planning of an institution for future years. With the emergence of data mining and deep learning, many predictor models were introduced by analyzing the previous year student's dataset. This paper presents an approach for using deep learning algorithm to make a placement prediction model for pre-final year engineering graduate students.

1. INTRODUCTION

According to statistics 1.5 million engineers are graduating each year in India. The demand and need for qualified graduates in field of IT industry is rising day by day. But most of the students are unaware about the needs of the IT industry. The number of the student graduates who satisfies the requirements and quality of a company is very low. Placements are one of the biggest challenge faced by a student in the lifetime. It is the responsibility of the institutions to provide maximum placement chance to its students. Also the placement cell and teachers of an institute should take proper steps in order to produce a set of students suitable for each company's requirements. A placement prediction system can be used to identify the capability of a particular student for the specified job. All companies in the IT sector spends a large amount of its total capital in recruiting the students to its company. Thus it is necessary to find an alternative process of filtering to reduce the capital cost that is used for this process. Effective filtering of students could be performed by applying various data mining and machine learning tools on the student details. Luan [1] defined the meaning of data mining in the field of education as a method of identifying, discovering and capturing the unknown similarities or patterns from a dataset by using an ensemble combination of various analytical approaches. It is possible for an educational institute to exploit this data mining feature to figure out the recruitment policy of a company from previous year placement statistics and student dataset. So the placement cell of the institution could prepare a placement predicted list for the present students. Thus it is very important to conduct a study on various placement prediction systems.

2. Literature Survey

Introduction to the problem domain terminology

Today's Artificial Intelligence (AI) has far surpassed the hype of blockchain and quantum computing. This is due to the fact that huge computing resources are easily available to the common man. The developers now take advantage of this in creating new Machine Learning models and to re-train the existing models for better performance and results.

The easy availability of High Performance Computing (HPC) has resulted in a sudden increased demand for IT professionals having Machine Learning skills.

In this tutorial, you will learn in detail about:

- What is the crux of machine learning?
- What are the different types in machine learning?
- What are the different algorithms available for developing machine learning models?
- What tools are available for developing these models?
- What are the programming language choices?
- What platforms support development and deployment of Machine Learning
- What IDEs (Integrated Development Environment) are available?
- How to quickly upgrade your skills in this important area?

[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 K-Nearest 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

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.

3. OVERVIEW OF THESYSTEM

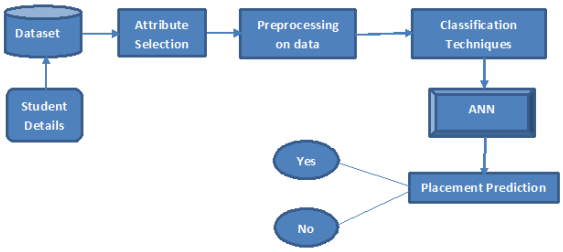

Fig 3.1 System Architecture

3.1 Existing System

According to statistics 1.5 million engineers are graduating each year in India. The demand and need for qualified graduates in field of IT industry is rising day by day. But most of the students are unaware about the needs of the IT industry. The number of the student graduates who satisfies the requirements and quality of a company is very low. Placements are one of the biggest challenges faced by a student in the lifetime. It is the responsibility of the institutions to provide maximum placement chance to its students. Also the placement cell and teachers of an institute should take proper steps in order to produce a set of students suitable for each company's requirements. A placement prediction system can be used to identify the capability of a particular student for the specified job.

3.2 Proposed System

All companies in the IT sector spend a large amount of its total capital in recruiting the students to its company. Thus it is necessary to find an alternative process of filtering to reduce the capital cost that is used for this process. Effective filtering of students could be performed by applying various deep learning tools on the student details. This system defined the meaning of deep learning in the field of education as a method of identifying, discovering and capturing the unknown similarities or patterns from a dataset by using an ensemble combination of various analytical approaches. It is possible for an educational institute to exploit this data mining feature to figure out the recruitment policy of a company from previous year placement statistics and student dataset. So the placement cell of the institution could prepare a placement predicted list for the present students. Thus it is very important to conduct a study on various placement prediction systems. This paper presents a survey on different placement prediction system models and its application for the students.

4. IMPLEMENTATION

FUNCTIONAL REQUIREMENTS

- Admin Login
- Questions Dataset Upload
- Data Set Upload
- Student Login
- Student Registration
- Take Exam
- View Dataset
- Prediction.

Module Description

In Our System to find Placement Chance we are going to keep an exam in our application on areas like Coding Skills, Aptitude Skills, Technical Skills

and based on the results we are going to find the placement using Deep learning ANN algorithm .

5. RESULTS

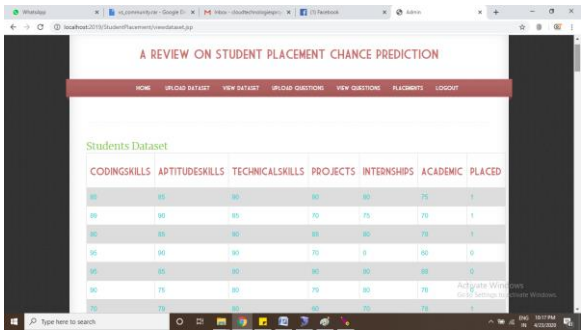

Fig 5.1: **View Students Dataset**

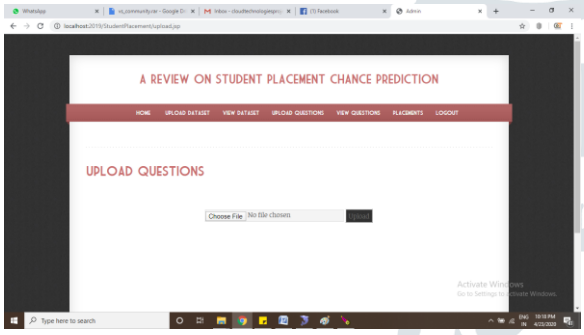

Fig 5.2: **Upload Questions Data set**

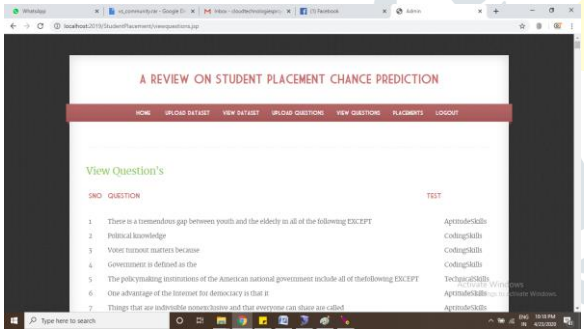

Fig 5.3: **View Question's**

6. CONCLUSION

A detailed study was conducted based on different placement prediction models. From the study it is clear that the student dataset containing academic and placement details are a potential source for predicting the future placement chances. This prediction can enlighten students to identify their capabilities and improve accordingly. This system also helps in the academic planning of an institution to prepare proper strategies and improve the placement statistics for the future years.

Future Work

It would of great help if we revise and update our curriculum and other extra activities for each semester in accordance with the public, private and government sector requirement. We can also predict which company picks which category of students. Make a list of skill a particular company looking for, then on the basis of that we can train our student. These traits will make prediction process more accurate.

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