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# PLACEMENT PREDICTION SYSTEM USING MACHINE LEARNING

**Ansari Maaz Majid[1], BAIG MARUF SHAHID[2], KHAN USMAN MAZHAR[3] ,BAGDADI SALIQ SAMIR[4],NOUSHEEN SHAIKH[5]**

[1234] *Artificial Intelligence and Machine learning Department.*
[1234]Anjuman Islam Abdul Razzak Kalsekar Polytechnic .

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**Abstract** -Engineering students are not sure what they want to study after graduation. Students are confused by the many options offered by universities such as postgraduate admissions, and factors such as salaries and different jobs worsen the situation. There is no reliable platform that allows students to predict outcomes from the beginning of engineering and take action to bridge the gap and create a better future. Students studying in engineering faculties need to know where they stand compared to others and what kind of placement they will get. Training and workshops are available when students enter their final year, but these are not useful for students to plan their future studies. Student placement is one of the most important goals of the school. Schools work hard to accommodate students. The aim is to predict the current year's student placement by analyzing the data students have collected from previous years. Prediction of student performance is an important part of the study because today all student development is directly related to the student's success in tests and activities. Therefore, there are many situations where it is necessary to predict student performance, for example, identifying students who are not performing well and taking steps to improve them. There is no platform for girls to review their current work and highlight their strengths. . Currently, there are platforms that are not trained on real and complete data and cannot learn from error prediction, which reduces accuracy in the long run. Our goal is to create one. To ensure the results are acceptable, the model will be trained on real data and a large number of positive and negative results will be obtained. The model proposes an algorithm to estimate the model. Information is collected by the school where the prediction will be made, using the necessary information before the process or by examining the historical data of the previous year's students, and the placement of the current students is predicted and helps to improve the placement percentage of the students. institute.

**Keywords**: task planning, task prediction, data decision making, machine learning algorithms, prediction prediction, student prediction, good study, student learning results, pre-process data, learning results.

## 1.INTRODUCTION

Student placement plays an important role in school. University placement is a way for companies to visit universities and identify talented and qualified students before they graduate. Therefore, making an informed career decision to enroll after completing a particular course is important in a student's life. Schools have a wealth of student information. Therefore, investigating patterns and features in this large data pool will help find the most important gaps for this deployment method. Nowadays, the number of schools is constantly increasing. The aim of all universities is to provide students with a well-rounded placement team. One of the biggest challenges facing universities today is improving educational placement. The main method of this project is to collect historical data of students from the previous year of school and check the admission of students of the current year. In this model, the probability of a student being accepted or rejected is estimated. This will help teachers focus on student growth over time. This will help increase the reputation of the university as having a system that helps students study and practice in the school environment. Current research focuses on helping students, bridging the gap between work and

education, and showing them the path to a better future The model was created to predict whether a particular student can be hired on campus. Data collected by students to check the prediction, including percentage, rates, returns, GPA, and enrollment experience. High performance is important in establishing the school's reputation. Therefore, such a system has an important place in university education. Students get the best results from this app. Students can manage their profiles, take programming language tests, create feedback and other content. There is a lot of information about students at the university, such as GPA, grades, internships, projects and certificates. Statistics obtained from students will help them analyze and understand how they can improve themselves for better treatment. Data validation can also help the TPO verify the data, and if it is inaccurate, the TPO can modify the data to make it more accurate

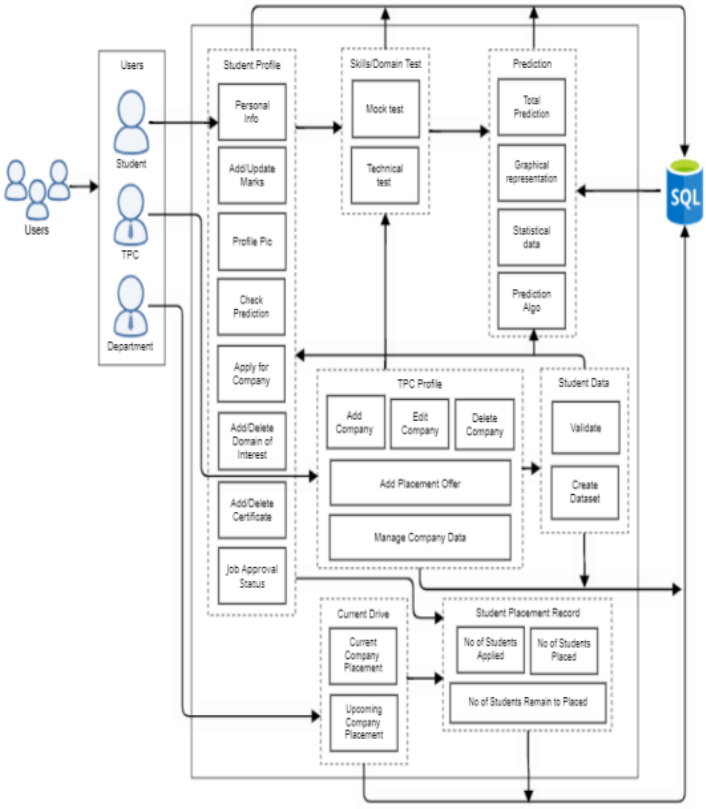
## 2. System Architecture Design

The system architecture of our system provides the details of the projectStudents can add personal information, scores, check predictions, use for companies, add interests and view job approval statuses.

Students can also take practice and skills tests.

TPC can add, remove and edit companies, add office hours, manage company information, define and create student information The department will update female students, students not placed in classes and student information. students who cannot be placed in classes.

**Figure 1**: System Architecture for Placement Prediction System




### 2.1. Future Scope

Expanding the use of machine learning in forecasting is beneficial for students and companies. Here are some opportunities for future expansion in this area

1. Improved data collection: The accuracy of the forecast can be improved as more data is collected. This includes everything from social media profiles, personal projects, online courses, etc. may involve integrating information. The more detailed the data, the better the prediction.

2. Current Updates: Incorporating up-to-date information such as the latest achievements, certifications and qualifications can provide updated estimates of a student's progress. This requires constant data monitoring and analysis.

3. Natural Language Processing (NLP): NLP can be used to determine not only students' cognitive skills but also their communication skills. This will include assessing their writing and communication skills to determine whether they are suitable for a role that requires effective communication.

4. Behavior analysis: By analyzing students' behavior and preferences, machine learning models can predict whether and how students will adapt to the company's culture regulations. This can lead to better employee and company retention.

5. Personalized recommendations: Machine learning techniques can be used to teach specific skills, lessons, or experiences to improve a student's job performance. This creates a method that suits everyone.

6. Working with companies: Working with companies can give insight into their changing needs and preferences. Machine learning models can be fine-tuned to meet these needs, increasing the chances of successful deployment.

7. Feedback loop: Tracking students' progress and performance once they are placed can provide valuable feedback for adjusting predictive models. At the same time, this iterative process can also increase the accuracy of the prediction.

8. Ethical considerations: As AI-powered predictive placement becomes more common, ethical considerations regarding privacy, bias, and fairness become important. Future expansions should focus on reducing bias and improving accuracy in how predictions are made.

9. Global business integration: As business becomes more global, machine learning models can integrate data from different countries and regions to provide predictions for international operations.

10. Intelligence assessment: Integrating intelligence measures such as teamwork, leadership, and adaptability can increase the accuracy of prediction because these skills are essential for success in any role. Overall, using machine learning to evaluate job predictions has the potential to transform students' careers and the way companies identify good talent. However, balance innovation with ethical considerations and determination to improve overall job search and hiring processes

## 3. CONCLUSIONS

As we have seen throughout our studies, that the problem statements we have approached are student, college, and corporate centric. The solution to all of these problem statements, is based on the model we are going to build, the output of which will be a number between 0-1, which will determine, the prediction of a student being placed. During this process, a lot of other dependent variables will be predicted which will help solve the problem statements.

The expected outputs of the system for student end, is the prediction about their placement, and the statistics of how they can fair well. College end will have the analysis of every student, and will have the opportunity to focus more on the improvement of students. Also because of the system, the college will have one platform to manage the data of the students, thus solving another issue.

The corporate will be able to apply filters, compare students, and download resume of the students they're interested in, also they will get student related questions that they can ask, in the interview.Placement Prediction system is a web-based application which predicts student placement status using machine learning techniques. Many research papers are there related to educational sector, all these papers mainly concentrate on student performance predictions. All these predictions help the institute to improvise the student performance and can comeup with hundred percent results. Many of the previous system concentrate on a less number of parameters such as CGPA and Areas for placement status prediction which leads to less accurate results, but proposed work contains many educational parameters to predict placement status which will be more accurate.

From a proper analysis of positive points and constraints on the component,it can be safely concluded that the product is highly efficient GUI based component. This component can be easily plugged in many other systems where such kind of prediction and management is required.Also the component is user friendly i.e.it is easy to understand and also easy to use.There is a need to solve the different placement problems arises during the process.This software comes with just the solution.

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