Student Placement Prediction Portal

Sanket Shinde[1], Anurag Bobde[2], Shubham Ghadge[3], Rushikesh Babar[4]

[1,2,3,4] Students, Department of Computer Engineering, Zeal College of Engineering and Research, Pune, Maharashtra

Abstract - Placement of student is one in every vital activity in an academic establishment. Admissions and name of establishment primarily depends on placements. Hence all the institutions strive to strengthen placement department. This project predicts how likely a student is to be placed in a particular job after graduation, by giving test and using machine learning model. Machine Learning is a way of statistical evaluation that automates analytical version construction. The model takes into account factors such as the student's grades, aptitude score and the type of job they are looking for. The machine learning model is then used to predict the probability of the student being placed in a job, which is outputted as a percentage. A machine learning model for student placement prediction system is proposed which is based on the companies' technical and aptitude test and academic profile. The model is trained on the data from various companies and is tested on the unseen data. The results show that the proposed model is able to predict eligibility of the placement of students in various companies.

INTRODUCTION

In the rapidly evolving landscape of education and industry, the process of matching qualified students with appropriate job opportunities has become a pivotal aspect of ensuring a successful transition from academia to the professional world. To streamline this process and enhance the prospects of both students and recruiters, we present the "Placement Selection Portal" – an innovative and comprehensive solution designed to revolutionize the way placements are conducted. The institutions, in order to offer the best training to their students, follow a decision-making process. To back up the decision-making process, different techniques and methodologies involved in education data mining were used for identifying the knowledge by understanding the student databases. Accuracy of algorithms using Machine Learning. Logistic regression Requires a large amount of data: Logistic regression requires a large amount of data to train the model. This can be a challenge for placement selection portals, which may not have access to a large dataset of student data Use a combination of machine learning algorithms This can help to mitigate the weaknesses of individual algorithms. For example, logistic regression can be used to identify the most important features, while SVM can be used to make the predictions. Use ensemble learning: This is a technique that combines the predictions of multiple machine learning algorithms to make a more accurate prediction. to a large dataset of student data. Use active learning This is a technique that allows the placement selection portal to select the most informative data points to collect. This can help to improve the accuracy of the model by ensuring that the data that is collected is relevant to the task at hand. Use domain knowledge: This is the knowledge of the specific domain that the placement selection portal is operating in. This knowledge can be used to improve the accuracy of the model by helping to select the right features and interpret the results of the model. ZCOER, Department of Computer Engineering 2023-24 8 We have made a visual portal (UI) based on machine learning algorithm. It is basically website which have feature of giving relevant company related to marks (which is basic criteria for placement which every company follows). Various algorithm which gives different accuracy. We have made security related work which will keep user data safe and secure through authentication. Ensure Data Privacy and Security: Implement robust security measures to safeguard student data and personal information. Comply with relevant data protection regulations to ensure user pri3vacy. Higher speed and better performance with a limited number of samples. The goal of effective UI is to make the users experience easy and intuitive, requiring minimum effort on the user's part to receive the maximum desired outcome. Deploy the portal on a hosting platform or server to make it accessible to users. Ensure that the portal's performance meets user expectations

RELATED WORK

This section summarizes the works in the state-of-the-art related to student placement prediction. In computer science education system programming plays an important role. The students are ranked according to their skill level in programming and aptitude. The software companies also recruit and evaluate employees by their programming skills through some programming tests and contests, etc. A system to predict the placement and ranking of programming contests, which relieves teachers and recruiters from their burden, is proposed in

[1]. Educational data mining is mining patterns from educational data [2]. This study includes the interesting research areas viz modeling the students' learning curve [3] and modeling the learning style [4]. This field also has the allied area of research such as modeling human behavior for predicting the memory process [5]. For taking important decisions or to assist educators, data mining techniques are used to discover useful information in educational environment. For example, a work showing how to predict the bad coding practices of the students is presented in [6]. The authors in [7] present a data mining methodology to analyze relevant information and produce different perspectives about student to monitor their activities. This study applied different classification algorithms on students' previous and current academic record. Based on that, a model is proposed to find an enhanced evaluation method for predicting the placement for students. In [8], authors propose a placement prediction system to predict the likelihood of a student understudy in getting a job in IT organizations. The scholarly history of the understudy just as their range of abilities like programming aptitudes In [9], authors directed an examination to foresee understudy placement prediction status utilizing two characteristics: area of interest and Cumulative Grade Point Average (CGPA)This system predicts the students to have one of the five placement statuses, viz., dream company, core company, mass recruiters, not Eligible and not interested in placements. This prediction helps the institute to focus attention on students based on their interest.

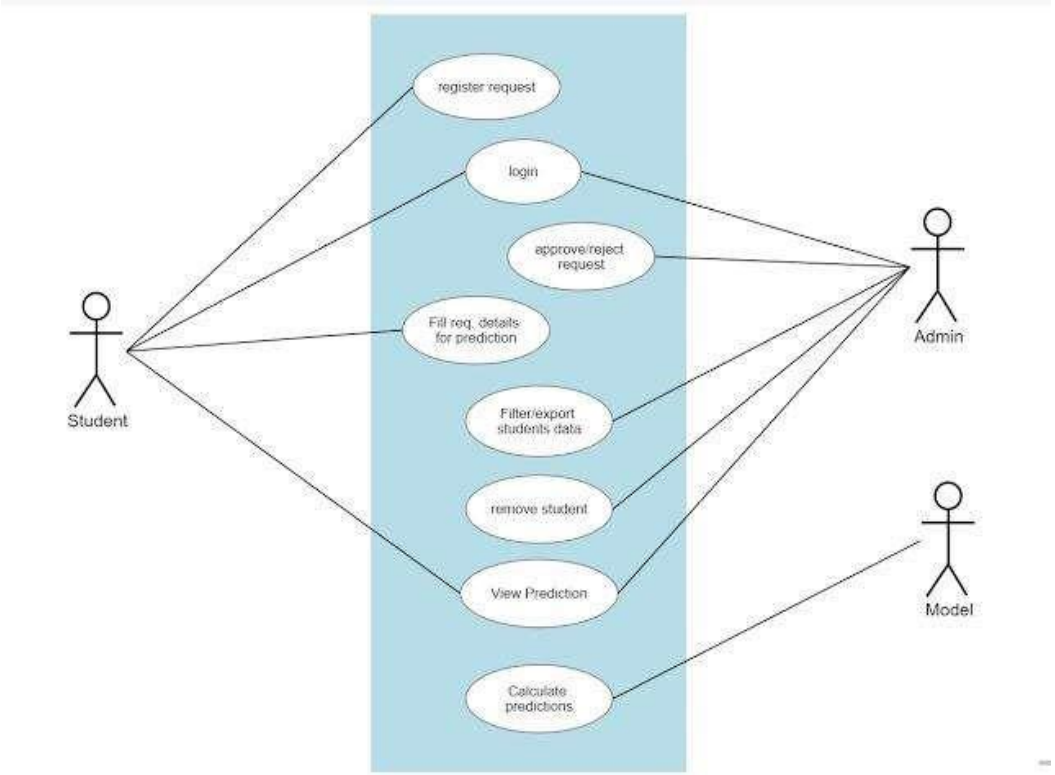
MOTIVATION

Embarking on such a project can be a valuable learning experience and contribute positively to the educational and career development of many students. To help you channel your enthusiasm effectively, here are a few steps to get you started.

OBJECTIVE

The objective of creating a student placement prediction portal is to provide students with insights into their potential job placement opportunities based on various factors such as academic performance, skills, and industry trends. This portal aims to assist students in making informed decisions about their career paths and improve their chances of securing desirable job placements upon graduation.

SYSTEM ARCHITECTURE



CONCLUSIONS

The campus placement task is extremely a lot of vital from the organization's point of view as well as the student's point of view. The algorithms are applied to the data set and features are selected to build the model. These results recommend that amongst the machine learning algorithm verified. This portal will be helpful to students from the beginning of their Engineering career. This system will reduce the chaos caused at the end of the final year. Students will start improving themselves from initial year itself about their career awareness and learning new skills throughout their graduation course. This system will help them to achieve their dream company as well as they will learn how to overcome their weaknesses.

REFERENCES

1) Selvakumar A. Sheik Abdullah, A. Manoj, G. T. Tarun Kishore, "A New Approach to Remote Health Monitoring using Augmented Reality with WebRTC and WebXR", 22nd International Arab Conference on Information Technology (ACIT), DOI: 10.1109/ACIT53391.2021.9677324, 2022
2) M. Sandeep, and B.R. Chandavarka, "Data Processing in IoT, Sensor to Cloud: Survey," IEEE Publisher, 12th International Conference on Computing Communication and Networking Technology, IEEE Publisher, Kharagpur, 2021.
3) Sheik Abdullah, A. Manoj, and S. Selvakumar, "A Hybrid Data Analytic Approach to Evaluate the Performance of Stirling Engine using Machine Learning Techniques," 2021 IEEE Bombay Section Signature Conference (IBSSC), Nov. 2021
4) L. Al-Shalabi, "New Feature Selection Algorithm Based on Feature Stability and Correlation," IEEE Publisher, Vol. 10, pp. 4699-4713, 2021.
5) Nagamani, K. Mohan Reddy, and S. RaviKumar UmaBhargavi. "Student Placement analysis and prediction for improving the education standards by using Supervised Machine Learning Algorithms," 2020 Journal of Critical Reviews, vol. 7, no. 14, pp. 854-864, Jun. 2020
6) L. Ming, G. Xue, and H. Liu, "Research on the Application of Big Data in Education Industry," International Conference on Information Science and Education", IEEE Publisher, Sanya, 2020.
7) Manvitha, and N. Swaroopa, "Campus placement prediction using supervised machine learning techniques," 2019 International Journal of Applied Engineering Research, vol. 14, no. 9,pp. 2188-2191, Jan. 2019.
8) Ryosuke Ishizue, Kazunori Sakamoto, Hironori Washizaki and Yoshiaki Fukazawa, "Student placement and skill ranking predictors for programming classes using class attitude, psychological scales, and code metrics", Research and Practice in Technology Enhanced Learning, Vol. 3, No. 7, 2018.