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# Optimizing Career Trajectories: A Deep Dive into Placement Management Systems' Efficiency and Impact

Dr. E. Sujatha[1], Preethi Ponnan[2], G. Shanmuga Priya[3], T. Indumathy[4] and K. Maheswari[5]
[1,5]Department of Computer Science and Engineering, Saveetha Engineering College (Autonomous) Chennai, India
Email: sujathae@saveetha.ac.in, kmmaheswari24@gmail.com
[2]Department of Artificial Intelligence and Machine Learning, Sri Eshwar College of Engineering, Coimbatore, India
Email: preethi.p@sece.ac.in
[3]Department of Computer Science and Business Systems, Dr. N. G. P Institute of Technology, Coimbatore
Email: priyagsp1987@gmail.com
[4]Department of Medical Electronics, Saveetha Engineering College (Autonomous), Chennai India
Email: indumathyt@saveetha.ac.in

***Abstract*— The increasing advantages of automated systems now are at the highest position as a result many manual processes are automated. Since the automated system is in demand nowadays, educational infrastructures like colleges are making their manual or semi-automated system to function completely on a computer. One such system that concerns a college is the placement system's automation. The project aims at developing a web application for the placement cell. Placement Management System provides two distinct modules for students and placement officers. It enables students to register online and upload their academic and personal details. They will have their portals to update information as necessary and can view recent and upcoming job postings on their dashboard. Whereas, the Placement Officers will be able to utilize it to manage the student data as well as the hiring company's data concerning the available jobs. The benefits of the system will be to provide enhanced facilities and assemble all the placement related tasks carried out on various platforms to a single application. This will give both the placement officer and students an accurate communication channel and reduces repetitious work that has to be carried out. Additionally, email alerts can be provided to students in case if any new activity takes place which ensures that no important announcement is missed.**

***Keywords*— Placement Management System, Job Recommendation, Interview**

## I. INTRODUCTION

The system provides the facility of viewing both the personal and academic information of the student and company. You can also search for eligible students or companies, or admins can insert or delete records. The main objective of Placement Management System is to manage the details of Student and Placement Cell. It manages all the information about CGPA Mark, Placement Cell.

The purpose of the project is to build a web-page to reduce the manual work for managing Academic information and CGPA Mark. Editing, adding and updating records is improved which results in proper management of data. One can also export PDF of Resume. Tracks information of Student details and Placements.

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In the existing placement system, maximum work goes manually and is an error-prone system, takes time for any changes in the system. This big problem is the searching; sorting and updating of the student data and no any notification method available for giving information to the student except the notice board. The proposed system gets automated in the online registration all the user, activation of the user and deactivation of the user, personalization to the user, resources to be provided online, communication between the users, and gives online feedback. The admin can see the user information and will validate it, generate the student list based on company criteria; company details can be provided to the user, searching and sorting can be done, and reports to be generated. Alumni data to be maintained. Overall, all the process of the training and placement department is automated.

The college training and placement officer had to refer all the records of previous years for even minor details. This used to be tedious and more time consuming than it sounds. It becomes more difficult when the number of students increase each passing year. There are other limitations of existing system. In manual placement management system, all the task is done by human interventions. Not all students are aware of the placement updates by training and placement officer of the college, therefore they may lose an opportunity to grab a seat for job interview.

It is a web-based application for the placement department that runs on the Windows operating system of the institution in order to put the information of the college's students in a database for corporations to utilize a secure login makes their recruitment process easier. This paper explains how to solve a problem that arose in an existing manual system. The suggested system comprises activities such as data registration, updating, and searching. data from students. The administrator is the most powerful user. The rest of the users Students can register and access or amend their academic or personal information. The administrator will also keep a list of students who have been placed.

## II. EXISTING SYSTEM

Traditional task placement algorithms wasting large volume of resources [1]. It addresses the heterogeneous devices. Virtualization provides most promising solution for fault-tolerant [2]. Optimized energy consumption [3] in data centres using virtual machines.

Virtual network functions help to address the challenges of placement activities [4]. Placement schemes [5] are focussed by edge-node for low-cost and time efficient. 6G is implemented for placement functions [6] minimizes the number of nodes. It suggests that admission and placement activities are deployed with 5G [7]. It focuses on the real-time dynamic scheduling for jobs [8].

It also deploys industry 4.0 setup. It presents that IoT devices improve the efficiency of the proposed system. This acts as recommendation system in job markets based on resumes [9]. It is suggested to provide solution for scalable jobs and reduces congestion [10].

Multiple job placement is offered [11] using heterogeneous deep learning clusters with limited computational resources. Flexible job scheduling using neural network techniques and deep reinforcement learning [12]. AI based training for jobs using GPU [13] is discussed in this proposed model.

It is discussed about the [14]-[18] in the introduction chapter to identify the problem statement and design the proposed methodology.

## III. PROPOSED SYSTEM

The purpose of this paper was to develop an online portal for Education Institutions Training and Placement Departments where the system consisted of Administration Portal, Student Portal and Recruitment Portal separately maintained by the organization. The administrator has access to update student details in the database. The student can update his/her CV in the portal containing personal information and the same information can be shared by the administrator with different recruitment agencies to hire students according to their needs and based on the skills of the students.

The functional requirements for a placement management system mini project will depend on the specific needs of the institution or organization developing the system.

However, some common functional requirements for a placement management system mini project might include:

### *A. Student Management*

Student Registration: Students should be able to register for the placement process by providing their basic personal information and academic details.

Student Profile Management: Students should be able to update their profile information, including their contact details, academic records, and skills.
Job Search and Application: Students should be able to search for available jobs based on their criteria and apply for them online.
Application Status Tracking: Students should be able to track the status of their applications and receive notifications about application updates.

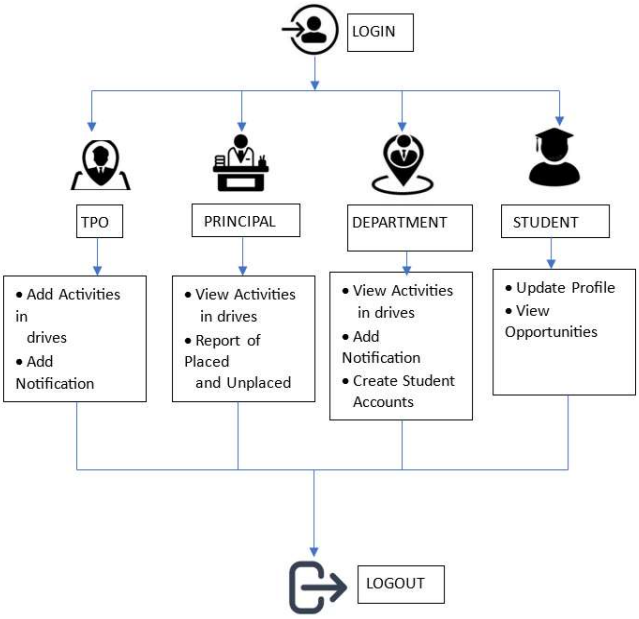


Figure 1. Architecture diagram

*B. Company Management*

Company Registration: Companies should be able to register for the placement process by providing their company details and contact information.
Company Profile Management: Companies should be able to update their profile information, including their company description, job openings, and recruitment criteria.
Job Posting: Companies should be able to post job openings with detailed descriptions, eligibility criteria, and application deadlines.

*C. Placement Process Management*

Placement Calendar: The system should maintain a basic placement calendar that displays upcoming placement events and deadlines.
Placement Notifications: The system should send automated notifications to students and companies about important placement events and updates.

*Performance Requirements*

The Performance Measurement is based on the accuracy of the upscaling phase. The higher accuracy rate of the system will reflect on the higher performance and efficiency of the system.

*D. Reliability Requirements*

With any amount of data, the project perform well and the correct accuracy can be found 99% of the time without fail.

## IV. Results and Discussions

The home page contains registration details with username, mail-id and password shows in figure 2. Upon authentication, it enables Placement Cell facilities.

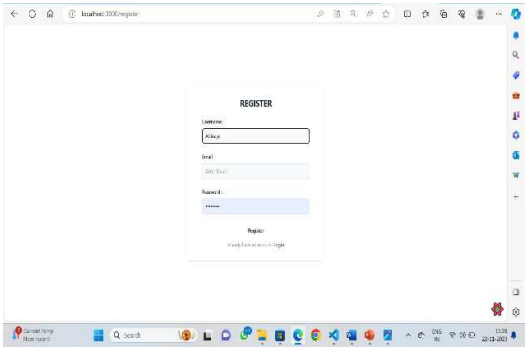


Figure 2. Login Page

There are four levels of users such as student, Training and Placement Office (TPO), Principal the head of the institution, Department TPO. All users can login using their login credentials. In figure 3, placement activities show that students activities and interview questions. They can access all the facilities enabled.

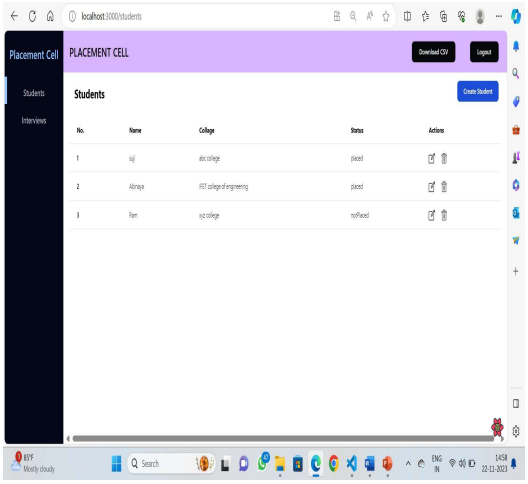


Figure 3. Placement Activities

In figure 4. Interview information ask for interview name, required skills and interview date. According the information fed in to the system, it will provide the status of the interview.

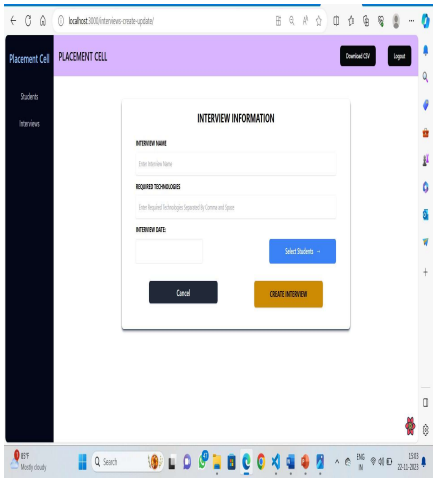


Figure 4. Interview Information

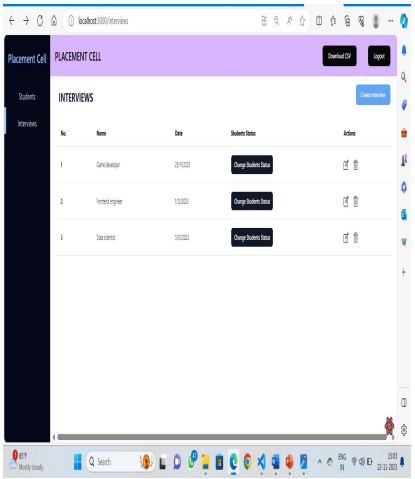


Figure 5. Interview Schedule

In figure 5 the interview schedule is displayed and can check the status of the interview.

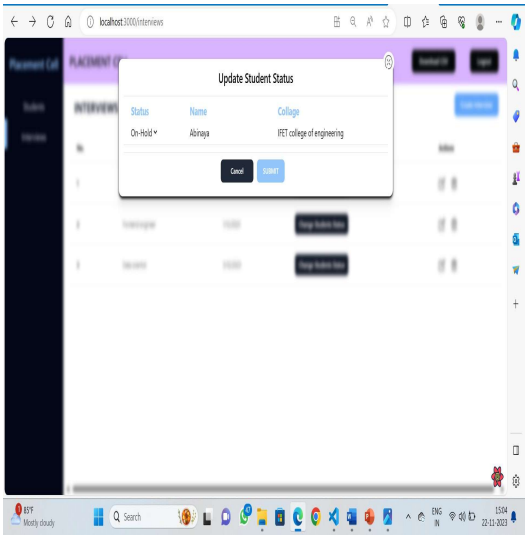


Figure 6. Update the Status

Figure 6 depicts about how to update the status and track of the schedule.

## IV. CONCLUSION

Recruitment System for College includes Student Login, Business Login and Admin Login. The project has student benefits, different companies visiting campus to recruit, and even university placement staff. The current manual system should be replaced with the fully automated recruitment system allowing for easy and flexible manipulation of different activities. This system automates the selection process activities that the human resources department must perform before and after the student selection process. This system helps in various ways such as saving time and money in selecting students and companies. This set of concepts is used to creates a system to facilitate communication between students and companies, and companies can obtain qualified students upon request. This system can be used in all internships that provide colleges for their on-campus internships. It can also be used specifically for a recruitment company. The Placement Management System (PMS) is a web-based application that aims to streamline the placement process for both students and recruiters. The system provides a centralized platform for managing student data, company information, and placement activities. It also offers a variety of features to help students prepare for interviews and recruiters find qualified candidates.

The PMS has been shown to be effective in improving the placement process for both students and recruiters. Students have reported that the system is easy to use and has helped them to better understand the placement process. Recruiters have also reported that the system has saved them time and effort in finding qualified candidates.

Future enhancement is to develop mobile apps and incorporate AI techniques for better user experience. This can be integrated with all other apps connected with students' details. Suggested to add the notification from employers such as other job portals.

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