

Placement Test Web Portal

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Abstract: Placement Web Portal is a system which aims at providing an easy and automated system for conducting placements during Campus Recruitment Drive. If placement process is conducted manually, then a lot of additional paperwork needs to be done; it requires a lot of time. This system will eradicate all manual work, by automating the information collection procedure, conduction of tests, displaying of results, as well as, storing it, notifying the eligible students via. Email and SMS, displaying the list of eligible students etc. Also, the system will display the student record just by giving a name as input. The system will also, display the graphical output of student feedback about the test and conducting sentiment analysis of the feedback given by the students. The overall system is probably a very basic step towards making the whole process of campus recruitment process artificially intelligent.

Keywords: Student Analysis, Sentiment Analysis, Automation, SMS, Test

I. Introduction

In today's world with the gradual improvement of technology, work process is becoming more and more automated. Now-a-days, Campus Drive is also playing an important role of being a stepping stone in the life of Under Graduate engineers. Conducting a campus placement drive is a cumbersome process, if conducted manually. Hence, automation of placement activity is the need of the hour. The efficient usage of computers in daily work has caused a sharp decrement in the paper work, usually required while conducting the placement drive. In the current scenario of the placement system at many institutes, student records are stored separately in an excel file. The officer then, generates names of eligible students for a company from the excel files. The student then signs the sheet. This is a cumbersome process, as the whole process repeats itself every time a company visits for placement. Also, many files get generated, and storage of them becomes a very tedious task. Misplacement of a single file can cause a lot of problems. Under the web portal system, a student first registers with the system. The student need not enter any information regarding the academic record, as all of it regarding the student is present beforehand. This helps the Training and Placement Department of the institute **to remain in contact with the students' academic** progress. This system is especially useful because, the result that will be generated after conducting the exam will have no errors in it. This will ensure that each student is not denied his/her chance due to human error during correction. Using this system, it will be easy for the T&P Officer to keep a track of progress of an individual student. This system is capable of displaying all the details of a student at a glance without doing any of the data extraction task. Also, the module of sentiment analysis will help the Training and placement department of the college to actually analyze, the output of the training given by the respective authorities with the performance of the students after the aptitude test completion. This system will also provide an overall review of the effort that an individual student take for clearing his aptitude test.

II. Background

This paper describes the solution for problem which is present in existing manual system. The major problem in existing manual system is searching and updating of the student data. The proposed system provides automation in all the processes like registration, update, and searching of the student data. Also, if the student is eligible for company then the student can directly apply for the company. This paper describes the idea about the users and their authority. This makes the application more easy and attractive. There are mainly two users: Training and Placement Officer (administrator) and student. The admin is the master user. Admin has the more number of priorities than the other users. The different functions involved are updating, approval. Student can register and can view and edit their profile details. This paper also describes the idea of automated email sending to the eligible students. This paper describes the involved steps, the first one is to maintain the list of

students and their records and other is to maintaining the company details and based on the visiting company's requirements, make the list of students branch wise, which is more complex task. This paper describes about feeding the criteria by the Training and Placement Officer and system will generate and send automatic email to eligible students. Also, the paper describes about the process of feeding information about upcoming company by the Training and Placement Officer and dynamic notification generation by the system. This paper describes about the connectivity issues in development of system.

III. Proposed System

This project focuses on building an online placement portal for the Training and Placement Department of the college.^[1] The portal almost eliminates the paperwork and human effort required for the chaotic process deployed during the placements. We, students of this college felt the need for a portal like this after being experienced this process. The proposed Online Placement Portal is intended to avoid all the drawbacks of the current system. There are mainly three types of users viz. Current student, Placement Officer of the institute and third, the Companies. The administrator is the master user as he gets most priorities than other users. The different functions in case of an administrator are updating, approval and modification of the portal. The administrator can view and approve various application forms too.

The working and operation of this portal is quite trivial. The students first enter into the portal through the website. They first have to register to the portal to get to a display where their profile is shown to them. While registering, they won't be allowed to enter their yearly engineering marks; they will be extracted from result analysis documents of college. This is important as it forms the base for the eligibility comparison at a later stage of the process. After registration, students can read important announcements, to obtain information on **assessment, to see the results of assessments recorded in the system's database. To prepare students for the companies**, the portal provides progressive mock tests which can be taken by students at anytime, anywhere. The mock tests are geared up in such a fashion that they test the student in the most apposite manner. There are 5 levels of test papers in each and every topic in each of headers like Verbal, Quantitative Aptitude and Reasoning. The 5 levels are progressive, which means, after every level of the test solved, it robotically serves questions of a higher level than the previous one. The second link in the tests section provides the link to the Process Tests conducted by the company during recruitment process. Students cannot access this section until **and unless the company's recruitment process commences. The solution set of all the tests is kept safely in the database** and in the case of company test; the companies upload the set to a temporary server created for mapping the attempts of the students to the solutions and generate the final list of aspirants passed.

After students attempt a number of tests, their profile will reflect their performance using bar graphs and percentages. It will include their good and bad areas in academics. Using this data, students can take tests of those specific topics in which they are not performing.

There are various tools used for the alleviation of current system. In all of them, the two focal tools are:

- A. **Sentiment Analyzer:** *A smart contrivance developed by us to detect and reflect what students feel about the tests when they go through them in the placement process. It works on the feedback given by the students in the feedback section of the portal. Assessment is done automatically and a bar graph is generated indicating positive, negative and neutral thoughts of the students about the tests.*
- B. **Resume Builder:** *Standardized format will be served on the portal and students will just have to enter **their skills in the respective topics and that's it. All students' information will be available in the database. All of these can be extracted automatically from the database for verifying and correcting academic details of the student. This greases the process of resume building.***
- C. **Report Generation:** *Analysis of Placed students, Un-placed students, department wise placement will be available through this tool.*

These tools are implemented to find the drawbacks of present system and improve on them. The Sentiment Analysis will tell the placement officers details about things like:

1. The mental state of a particular student during the exam and
2. Whether the result of the company test is as per the expectations of students made after the mock tests.

By a comparison of the bar graphs of mock and company tests, the officer will come to know whether the system is doing its best to help students excel the placement process or not. If not, then it will indicate the changes to be done and the sections in which improvements are to be done. The resume builder is a first-rate implement to help make their most important document simple and elegant.

The mistakes made by the students while building their resume are eliminated by the use of this tool. It provides **the common template to every student to remove rejection by the companies based on resume's appearance in any way.**

On the administrator's side, it is easy for the officer to haul out details submitted by the student


while registration by just entering the name of the student. The system will automatically check for student's eligibility for any company in particular according to the criteria given by the company. The names of students who erroneously register themselves for a company and not being eligible for are removed by the portal by a check performed at the database.

IV. Result And Discussion

DEPT	ROLL NO	ELIGIBLE STUDENT LIST
BECMPN B	32	ANAND SINGH
BECMPN B	27	AISHWARY SHUKLA
BECMPN B	23	MAULIK SHARMA
BECMPN B	54	RAHUL YADAV
BECMPNA	28	KISHAN YADAV
BEITA	67	NAYAN MAYUR

Figure 1: eligible student list

The above fig represents the list of eligible students for a particular company generated by the system as per the criteria defined by that company.



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• ACADEMIC QUALIFICATION:

Sr. No.	Examination	Year of Passing	College/Board	Percentage or CGPI
1	B.E. CMPN	2017	Thakur College of Engineering and Technology	7.46 CGPI
2	H.S.C	2013	Maharashtra State Board	70.83 %
3	S.S.C	2011	Maharashtra State Board	93.82 %

• TECHNICAL SKILLS:

1. Proficiency in JAVA programming Language
2. Working command of C language.
3. Working Command of J2EE Technologies like Java Servlet API, JSP, JDBC API, JSTL.

• PROJECTS:

1. Placement web application as per MVC Design Pattern using JSP, Servlet, JDBC, JSTL and using web technologies like HTML, CSS, Bootstrap, JQuery.
2. Shopping Portal as per MVC Design Pattern using Java Enterprise Technologies like JSP, Servlet, JDBC, JSTL
3. Online Exam Portal as per MVC Design Pattern using Java Enterprise Technologies

• EXTRA-CURRICULAR & CO-CURRICULAR ACTIVITIES:

1. Attended JAVA as a part of Imaar Employability Skills Development
2. Attended Wordpress and Joomla, Python app development workshop held in the year 2014 and 2015 respectively
3. Attended Cloud Computing workshop held in the year 2016 at TCEAT

• AREAS OF PROFESSIONAL INTERESTS:

1. Web Application Development
2. Web Designing
3. Java Software Development

Figure 2: Resume

The above figure is the result of resume regenerated by the system after student enters all the information required to make a resume.

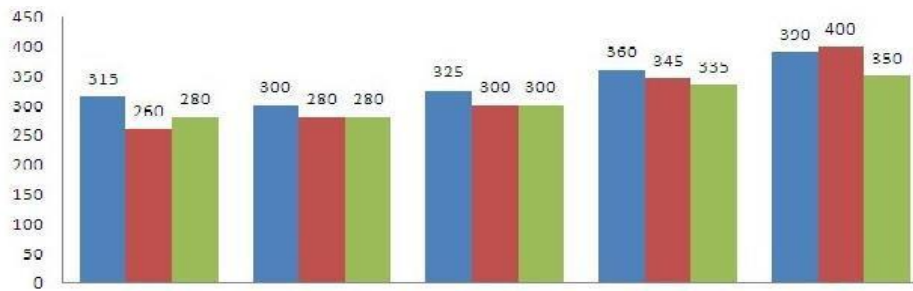


Figure 3: result of total number of students clearing each subject in aptitude

The above figure is represented by the system indicating number of students clearing in quant, verbal and logical reasoning respectively in different mock aptitude tests. Here, blue corresponds to quant, red corresponds to verbal and green corresponds to logical reasoning.

V. Conclusion

In the current scenario, most of the placement work is done manually. This manual working can be prone to errors. The biggest problem in the whole process is generation of eligible student list by correcting the **answer sheets of the students' aptitude test process in a short period of time. Also, the method to notify a student** regarding a recruitment event is not automated. The students are informed in various ways about the visiting **company's schedule and other selection process could be made more efficient as they are expected to be.** The implementation of the Placement web portal will not only automate all of the process, but also reduce the total time **required for conducting the tests during placement. There won't be any need to manually** generate the student list, as everything will be automatically controlled by the system itself. The system is capable enough to generate an analytics report for a given student by assessing all the record of the student till date. The system is versatile enough to be integrated with other system working in some other type of environments. Also, this system is open for addition of new modules or optimization, according to the changing pace of technology. This web portal requires less maintenance and is an open platform for young developers to get a good development experience of web technology. The module of sentiment analysis developed using R language, provides a path towards the domain of data analytics, as well as, statistical programming. This path will help the interested students, to actually work in the field of analytics. This system will also prove cost effective as the cost that is incurred for making the required stationary available to the candidates for aptitude test will totally be eradicated.

VI. Future Scope

The web portal is open to various sorts of development. In the current system, the Sentiment Analysis is conducted using machine learning technique. In the coming years, with the increase in the number of students, this same thing can be done using tools used for BIG DATA ANALYTICS. Also, more efficient machine learning techniques can be used to improve the working of the system. Various tools can be integrated which will help to study the behavior of the student sitting for placement process. This whole system can be made artificially intelligent. The artificially intelligent system **will be capable enough to track the students' record** from the time they take admission in the institute. Also, a help assistant can be integrated in the project, which will help in solving most of the difficulties faced by the student. This system will also have the potential to carry out research activities (only after adding the necessary implementation in the system), by identifying the Research oriented students to develop projects respective to various domains.

References

- [1]. Priyanka Hajare, Priyanka Khandave, Shital Adhav, Swati Pimpale, Prof. Anagha Kulkarni, "Implementation of Online Placement System". International Journal of Emerging Research in Management & Technology ISSN: 2278-9359, Vol.5, Issue 1, January 2016