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Candidate Hiring Through CV Analysis

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Abstract - *In the modern era of information technology most organization have realized that human resource is very important for their success ,but here the efficiency of the human resource solely depends upon getting right person with right skills for right job. This recruitment application is system in which HR can automate the human resources. Applicant can also register themselves online, view organization requirements and apply for the suitable job. This kind of application plays an important role in simplifying the recruitment process. The system has facilities where candidates can upload the CV's and other academic achievements. Recruitment application make possible for managers to access information that is crucial to managing their stuff, which they can see for human resource management, staffing and planning activities. The primary purpose to develop this system is to optimize the recruitment process for an organization. Besides, the qualified applicants could be selected by theirs application based on their qualification and company requirement.*

Key Words: Information extraction, Filtering, Ranking, Shortlisting, Sorting.

1. INTRODUCTION

All major industries today are driven by technology. According to current statistics, information available on the internet is about 77% of what we need. This figure is expected to rise exponentially in the near future. Companies are publishing more and more information on the internet about every aspect of their business and their growth. Recruiters receive large numbers of applications through e-mails, online job portals, or through services provided by partner staffing companies. Online job portals like monster.com, shine.com, naukri.com, and firstnaukri.com draw in most of the applications. Resumes obtained from such diverse sources are thus difficult to process and store in a unified database format. It becomes very tedious to select the most appropriate ones. Since resumes are structured documents containing information based on the author's thinking and writing skills, they can be created in a multitude of formats (e.g., plain text or structured table, languages). This makes the information extraction (IE) process highly complex. Dynamic filtering techniques are used by the industry to extract relevant resumes [3]. These filtering techniques match hundreds of resumes from the database to a single job posting. Resumes extracted by these filters are generally similar to each other as they satisfy the same search criteria, based mainly on keyword matching. The application fetches resumes which satisfies the requirement of a particular job post.

2. Existing System

Existing system performs cutthroat process that generally leaves the companies with a good, but not great employee at a significant financial investment. As the industries have grown, their hiring needs has rapidly grown. To serve these hiring needs certain consultancy units like employment websites have come into existence. They offer a solution in which the candidate has to upload their information and submit it to the website. Then these websites would search the candidates based on certain keywords. These websites are middle level organizations between the candidate and recruiter. These websites are also not flexible as the candidate has to upload there resume in a particular layout, and these formats changed from system to system. These systems charge a certain amount per resume. According to the survey Monster.com charges Rs.1.44 lac (INR) for 50,000 resumes. Hence such systems are not cost effective.

3. Proposed System

The motivation behind this system is to develop an application that will assist organizations in the recruitment process [1]. This is far different approach than employment websites. Our system allow the candidates to enter information about academics, skill set etc. and upload their resumes. The entered information is then analysed by our system. This makes our search process easy. The analysing system works on the algorithm that uses ranking, which is a sub domain of Text Mining [2]. System reads the information entered by user such as SSC marks, HSC marks, degree aggregate, programming languages known and performs ranking. This acquired information is stored in the database. This stored information can be accessed by HR, HR can simply provide keywords to the system and system will find all the relevant resumes that match with the keywords.

4. System Architecture

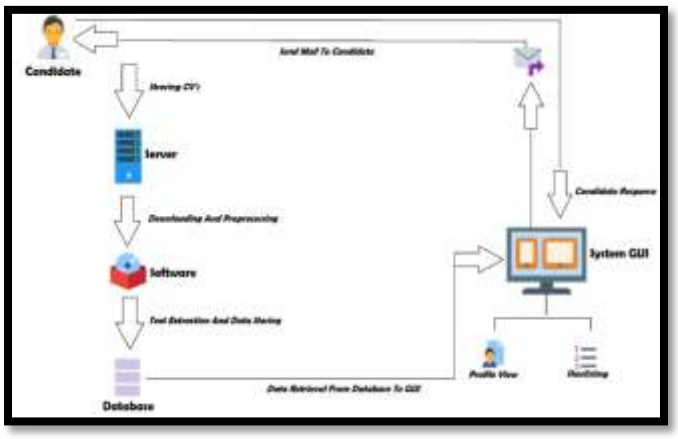

Figure 1: System Architecture

Major components of the proposed system:-

i. User or Candidate

- Registration: Candidates will be allowed to register through website and can upload their resumes.
- Receiving Notification: Candidate will be notified after registration and after getting selected in recruitment process.

ii. HR

- Retrieving candidates: HR can view the profile of candidate.
- HR can send the notifications to the candidates.

iii. Software

- Software extracts the information from CV's using algorithm.
- Storage as well as retrieval of the information.
- Software can send notification to the candidate.

5. Ranking Algorithm

Each candidate will be scored based on the skillset, experience and academics. Scoring will also be influenced by user profile. The focus in Information Retrieval research lays on text classification systems which make binary decisions for text document as either relevant or non-relevant with respect to a user's information need. We used precision, recall and F-measure metrics for performance evaluation.

Performance Measures:

Precision- Precision measures the number of relevant items retrieved as a percentage of the total number of items retrieved.

Precision= #relevant items retrieved / #retrieved items

Recall- Recall measures the number of relevant items retrieved percentage of the number of relevant items in the collection.

Recall= #relevant items retrieved / #relevant items

6. Conclusion and Future Scope

We are presenting a highly efficient, cost effective recruitment system. The system collects and analyzes the data from the websites. We are addressing the problem regarding recruitment of right candidate for right post in economical way. In this, we have implemented a system which helps organizations to hire eligible candidates. Because of this system, HR can directly search for the required resumes in a fraction. In future scope, the system can be extended by including aptitude tests, language proficiency tests etc.

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