

Resume Extractor and Candidate Recruitment System using Online Test and SMTP

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Abstract

Automated Resume Extraction and Candidate Selection System is a product which can be best suited for any organization's recruitment process. The system will be robust enough which will automatically extract the resume content and store it in a structure form within the Data Base [1]. Classification algorithm (Naive Bayes) will be run on the profiles to identify profile Categories or classes. Also the employer can specify his criteria and also decide the importance level. As the internet grows, amount of electronic text increases rapidly. This brings the advantage of reaching the information sources in a cheap and quick way. Keywords are useful tools as they give the shortest summary of the document. But they are rarely included in the texts [2]. There are proposed methods for automated keyword extraction. This paper also introduces such a method, which identifies the keywords with their frequencies and positions in the training set. It uses Naïve Bayesian Classifier with supervised learning.

Keywords: Conceptual Matching; Resume Extraction; Online Recruitment; Knowledge base Assisted Classification

I. INTRODUCTION

Now days, Many companies can hire candidates through offline process or advertise through social media, newspaper, etc. it is too complicated and time consuming process. The purpose of this project is to build Resume Extractor and Candidate Recruitment System which will be built on java. Large enterprises and head-hunters receive several thousands of resumes from job applicants every day [1]. HRs And Managers go through a hundreds of resumes manually. Resumes or Profiles are unstructured documents and have typically number of different formats (eg: .doc, .pdf, .txt). As a result manually reviewing multiple profiles is a very time consuming process. How to ensure you have the Appropriate Candidate in the right jobs at the right time. This is a significant problem faced by large companies today in the market.

Now a day's many job portals are available but the basic problem in available system are it required manual efforts for both candidates and Employers. Candidate has to provide complete information in given text filled and employer also needs to apply many filters to select the candidate. Even though Employer has applied many filters he would get thousands of resume even going through it and selecting candidates is very inefficient and time consuming task [6]. Some Costly extraction systems are available in the market that also do the search on keyword basis and has many extraction limitations like forcing candidates to fill templates and keep updating the templates as per job profiles. Not a single intelligent tool available in the market has benefits of data mining as well as which will take consideration of information present in social networking.

II. PROBLEM STATEMENT

In existing work lack of problems occurs regarding candidate recruitment process, number of manual work, no guarantee to hire perfect candidate that is why we implement proposed system Resume Extraction and Candidate Recruitment System with the help of Online Test and SMTP Protocol to hire perfect candidate with minimum time period and less amount of work.

III. GOALS & OBJECTIVE

The key objectives of current work are as given below:

- 1) Our objective is to build architecture for intelligence-based parsing engine, which will improve recruitment process as efficiently as possible.
- 2) The goal of this project is to build a product which can be best suited for any organization's recruitment process.

- 3) The system should be robust enough which will automatically extract the resume content and store it in a structure form within the Data Store.

IV. PROPOSED SYSTEM

HRs and Managers go through a hundreds of resumes manually. Resumes or Profiles are unstructured documents and have typically number of different formats (eg: .doc, .pdf, .txt).As a result manually reviewing multiple profiles is a very time consuming processes [5]. How to ensure you have the Appropriate Candidate in the right jobs at the right time. This is a significant problem faced by large companies today in the market.

Automated Resume Extraction and Candidate Selection System is a product which can be best suited for any organization’s recruitment process. The system will be robust enough which will automatically extract the resume content and store it in a structure form within the Data Base. Classification algorithm (Naive Bayes) will be run on the profiles to identify profile Categories or classes [2] [4]. Also the employer can specify his criteria and also decide the importance level. As the internet grows, amount of electronic text increases rapidly. This brings the advantage of reaching the information sources in a cheap and quick way. Keywords are useful tools as they give the shortest summary of the document [1]. But they are rarely included in the texts. There are proposed methods for automated keyword extraction. This paper also introduces such a method, which identifies the keywords with their frequencies and positions in the training set. It uses Naive Bayesian Classifier with supervised learning.

V. NAIVE BAYES CLASSIFIER

Naive Bayes classifiers are a collection of classification algorithms based on Bayes Theorem. It is not a single algorithm but a family of algorithms where all of them share a common principle, i.e. every pair of features being classified is independent of each other.

A. Bayes Theorem

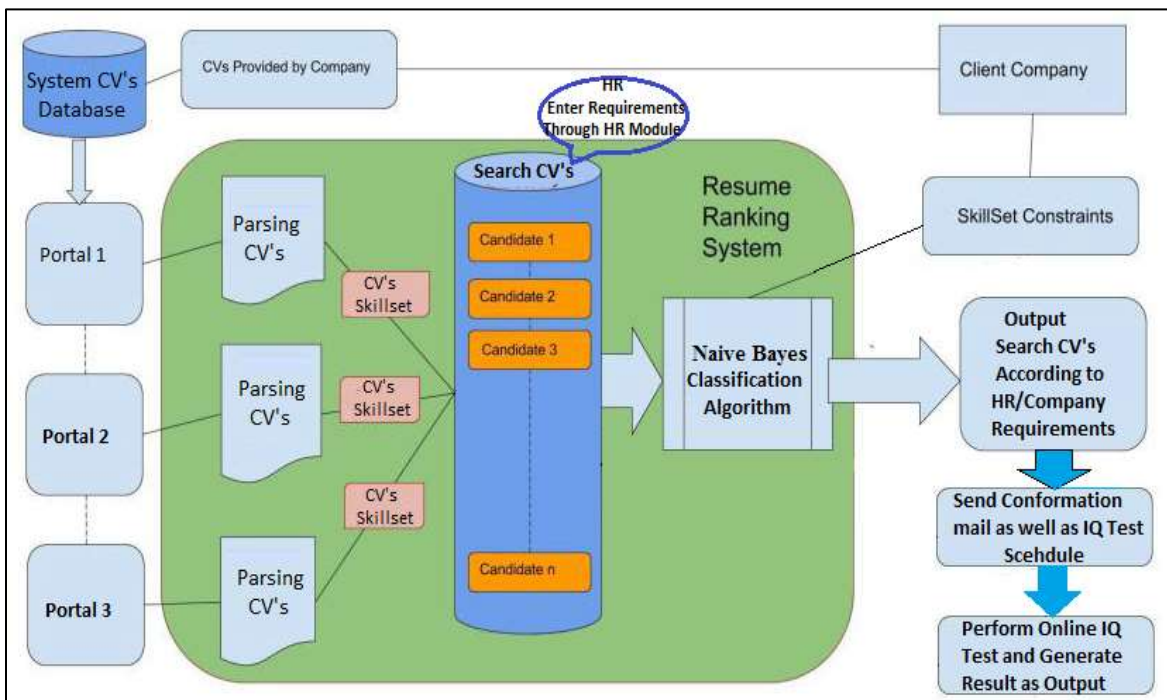
Bayes Theorem finds the probability of an event occurring given the probability of another event that has already occurred. Bayes’ theorem is stated mathematically as the following equation:

$$P(A|B) = P(B|A) P(A) / P(B)$$

Where A and B are events

- Basically, we are trying to find probability of event A, given the event B is true. Event B is also termed as evidence.
- P(A) is the priori of A (the prior probability, i.e. Probability of event before evidence is seen). The evidence is an attribute value of an unknown instance (here, it is event B).
- P(A|B) is a posteriori probability of B, i.e. probability of event after evidence is seen.

VI. SYSTEM ARCHITECHTURE



VII. SOFTWARE & HARDWARE REQUIREMENT

A. Hardware Requirements:

There should be required devices to interact with software.

System : Pentium IV 2.4 GHz.
Hard Disk : 40 GB.
Ram : 512 Mb.

B. Software Requirements:

Operating system : Windows XP/7.
Coding Language : JAVA/J2EE
IDE : Eclipse kepler
Database : MYSQL

VIII. CONCLUSION & FUTURE WORK

Here we are providing a unique system which is robust enough to automatically extract the resume content and store it in a structure form within the Data Base. This system will make the task of both candidate and HR Manager easier and faster. This system avoids the hectic form filling procedure of the candidates by directly asking the user to upload only the resume. The HR Manager also just needs to fill his/her criteria instead of manually going through all the resumes.

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