

ResumeScan: Application Tracking and Career Prediction Model

Mishika Sippy¹, Jeetika Khandelwal¹, Aishita Jain¹, K.K. Mathew²

¹Undergraduate Research Scholar, Dept. of Electronics and Telecommunication Engineering, Thadomal Shahani Engineering College, Mumbai – 50, Maharashtra, India

²Assistant Professor, Dept. of Electronics and Telecommunication Engineering, Thadomal Shahani Engineering College, Mumbai – 50, Maharashtra, India

Abstract - An application tracking and career prediction system can decrease an association's general enrolment cost, increment efficiency, and raise the degree of fulfillment because of quicker and better consummation of exchanges and administrations. Text in a resume file stored in word format is cleaned, extracted and fed to a Natural Language Processing (NLP) module. The Human Resource Officer (HR) can characterize limitations on which the HR needs the candidates to be judged. These limitations are utilized to score every characteristic from the resume. At last, the combined score is utilized to exhibit the qualification of the candidate to the HR. An addition to the existing system is for the betterment of students. Text in the resume is cleaned, extracted and fed into a Natural Language Processing (NLP) module. This framework will foresee a profession way for the understudy utilizing his resume. Finally, the result is displayed.

1. INTRODUCTION

An Application Tracking and Career Prediction System (ATCPS) automates the entire recruitment process and helps your recruiters onboard the best top-notch candidates hassle-free.

According to a recent report from Software Advice, nearly 26% of recruiters claim that using an applicant tracking system is one of the top contributing factors for applicants to have a good candidate experience. An efficient applicant tracking system allows the company to guide every candidate through your hiring process from starting to end with ease.

Only 55% of the companies and start-ups use this kind of software to save the efforts of manually selecting candidates for interviews. The project aims is to cater this facility to non-users at an inexpensive rate.

Apart from the ease provided to recruiters, we plan to make ATCPS a helping tool for the students aspiring jobs as well. Through our project, we aim to provide help by showing them the possible job descriptions to our fellow classmates and other students wanting to find a job suitable to their skills.

According to the statistics, 60% of the final year engineering students are confused about the job domains they should

select. They have a hard time deciding what job role is ideal for them based on their skillset. This project will simplify this task for them and help them in deciding what kind of roles they can do.

2. RELATED WORK

In [1], the credentials like skills and other suitable data present in the resume is stored by a portable resume system in an easily accessible manner. It makes it simpler to share the user's data with individuals, companies or recruiters. This data can also be stored in various destinations and can be modified.

In [2], as new applications are received, many organizations scan the resumes into their databases and subsequently search key words to achieve a match between applicants' qualifications and job requirements. But typographical embellishments on some resumes cause scanning difficulties. In [3], Human Resource (HR) the board includes a significant employable capacity specifically enrollment. This enrollment work includes different yet measure based exercises like get-together of candidates' data, examining the applications, isolating the applications into qualified and inadequate for additional handling relying upon association needs, booking the meetings lastly choosing the most ideally equipped candidates for the work other than preliminary works. This capacity requires labor as well as necessities a great deal of time and innovation. Maybe they can improve the enlistment interaction so more proficient and qualified candidates can be chosen with less human intercession.

In [4], a system and method for storing resumes and job posting using a common skills database is provided, including: a server configured to operate a candidate interface module and a recruiter interface module; the talents database accessible by the candidate interface module and therefore the recruiter interface module; the candidate interface module configured to store job postings including one or more skills from the talents database; and therefore the recruiter interface module configured to store resumes including one or more skill from the talents database.

In [5], today more information than any time in recent memory is put away every day in various structures on the web, and it is consistently expanding. With expanding measures of information in the online data sets, the

requirement for assessment and streamlining in data frameworks is truly expanding. The field concentrates inside this task was done on request by an enrollment office situated in Great Britain. The fundamental space of this examination was to research the client experience and work process inside a candidate following programming (ATS). With the Task-Technology Fit (TTF) hypothesis as hypothetical structure, this investigation planned to apply this hypothesis in the assessment of the ATS called Bullhorn, by assessing the match between Task trademark and Technology trademark through subjective strategies. Results show how client experience and execution is influenced by the current TTF build.

3. METHODOLOGY

- After the resume has been uploaded, data was pre-processed using various methods. Cleaning (or pre-processing) the information commonly comprises of various advances.
- Removing extra spaces- More often than not the content information that we have may contain additional areas in the middle of the words, after or before a sentence. So to begin with we eliminated these additional areas from each sentence by utilizing ordinary articulations.
- Removing punctuations - The punctuation present in the content don't increase the value of the information. The punctuation, when appended to any word, will make an issue in separating with different words.
- Case Normalization- In this, we essentially convert the case of all characters in the content to either upper or lower case. As python is a case sensitive language so it will treat NLP and nlp in an unexpected way. We can easily convert the string to either lower or upper case by using `str.lower()` or `str.upper()`.

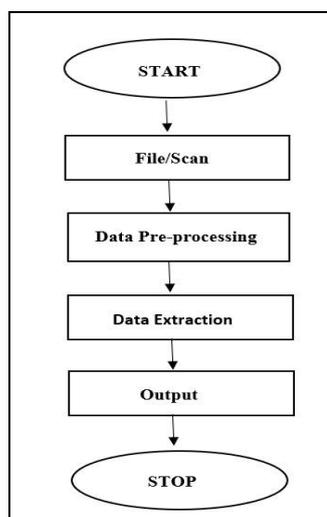


Chart -1: Process Flowchart

- Tokenization- Tokenization is basically parting an expression, sentence, section, or a whole record into more modest units, like individual words or terms. Every one of these smaller units is called tokens. Prior to preparing a characteristic language, we need to distinguish the words that comprise a series of characters. That is the reason tokenization is the most fundamental advance to continue with NLP. This is significant on the grounds that the importance of the content could without much of a stretch be interpreted by analyzing the words present in the content.
- Eliminating Stopwords- Stopwords include: I, he, she, and, yet, was, were, being, have, and so on, which don't add significance to the information. So these words should be eliminated which assists with diminishing the highlights from our information. These are eliminated in the wake of tokenizing the content.

3.1 PROPOSED SYSTEM FOR HUMAN RESOURCE

- The system takes input as resume of the student as a word document. The system also takes input of keywords of the skills required for that particular job role.
- Then, the system converts the resume into text, thus finding the required keywords.
- Those students having the necessary skills get selected by the HR for their open positions. The system also displays the percentage match of the student's skills to the required job description.

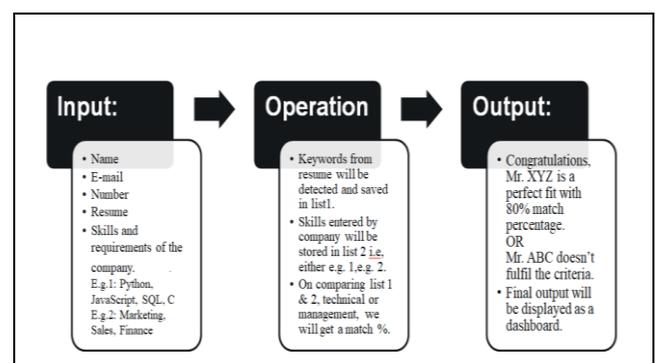


Fig -1: Proposed System for Human Resource

3.2 PROPOSED SYSTEM FOR STUDENTS

- The system has a set of predefined keywords assigned to the particular kind of job role it fits for. It then takes input as resume from the student in .docs format.
- It then converts the resume into text format, finding the keywords in the process. Those keywords from the resume are compared to the already predefined

keywords and the kind of job role the student is fit for is displayed.

- It also displays the companies associated with that particular job role in which the student can directly apply to.

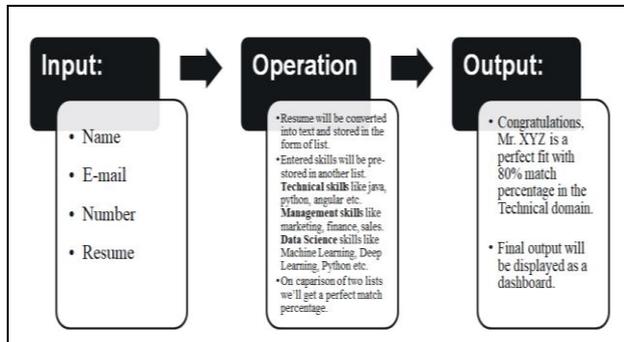


Fig -2: Proposed System for Students

4. ADVANTAGES

For Human Resource:

- Filtering Capabilities
- Reduce the Workload of Recruiters
- Minimize the Cost
- Enhance the Overall Quality of Hire Standards

For Students:

- Powerful sourcing tool
- Automated resume parsing and screening
- Analytics and reporting
- Guidance in choosing correct job domain

5. LIMITATIONS

For Human Resource:

- Automatic elimination of every resume (even great ones) that the system can't read and interpret.
- Misread resumes in PDF format and graphics.
- Missing qualified applicants due to wrong keyword selection.

For Students:

- Prediction of the career path is generalized. Only the domain can be predicted. (Technical, Management or Techno-Functional)
Eg: It will only detect the domain and not the sub-domain. It will not detect sub-domain like accounts or sales in management, web developer or database administrator, etc.
- Prediction is made based on their skills and not on the basis of their aptitude.

6. OUTPUT



Fig -3: Home page for HR

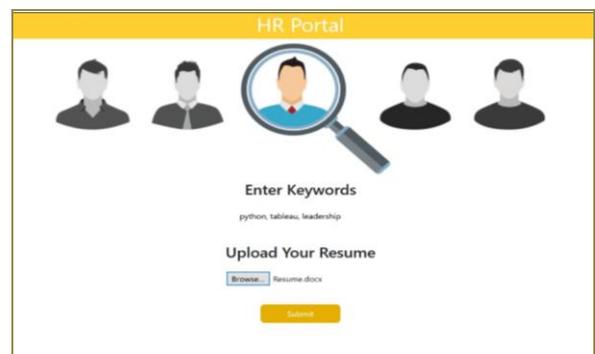


Fig -4: Resume uploading page for HR



Fig -5: HR result page



Fig -6: Home page for Students



Fig -7: Resume uploading page for students



Fig -8: Student result page

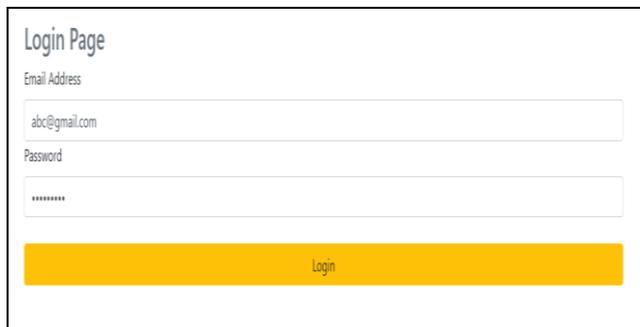


Fig -9: Login page



Fig -10: Signup page



Fig -11: Home page 1

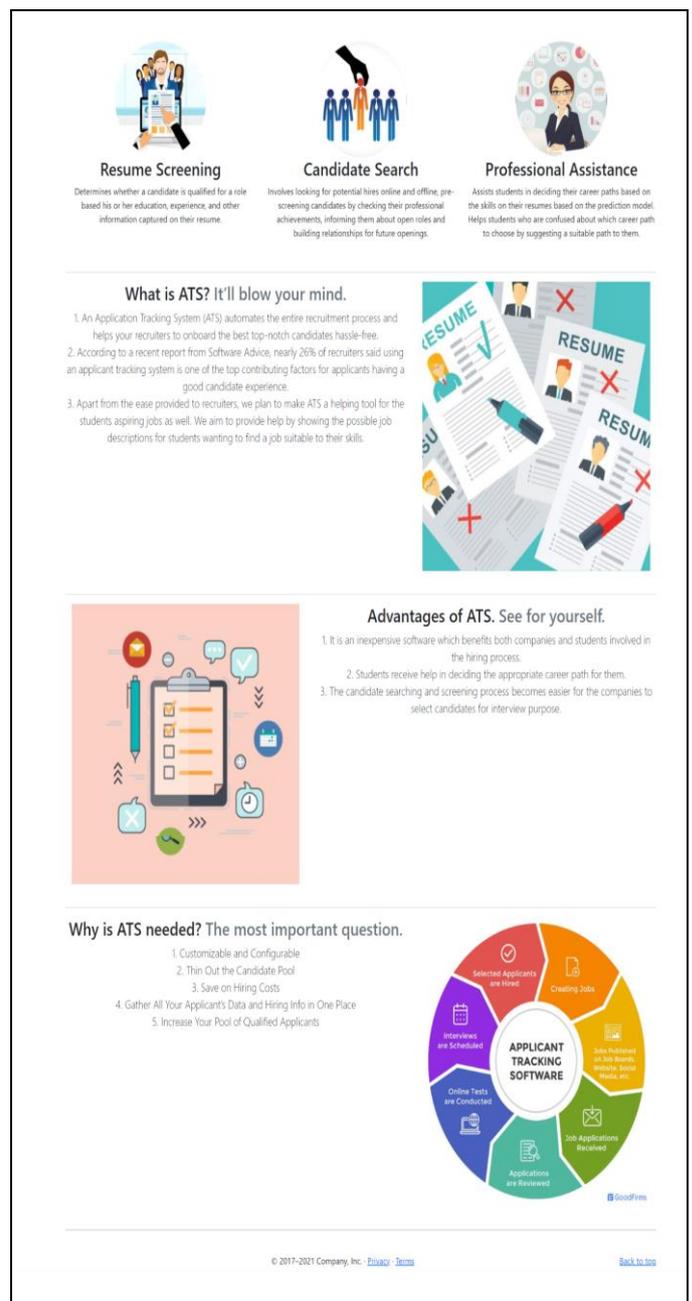


Fig -12: Home page 2

7. FUTURE SCOPE

- Interview Scheduling – The companies can shortlist candidates and send them a schedule of the interview.
- Offer Management – The companies to which the user has applied to for a job and the responses of the companies will be displayed.
- Database Connection – This will ensure smooth login for users and will allow HR personals to upload multiple resumes at one click.
- App development – An application based on this software can be developed.

- [5] David Do, Daniel Ohlsson. (2018). "The impact of Task-Technology Fit on user performance within an Applicant Tracking Software: A qualitative study on the Bullhorn system". Digitala Vetenskapliga Arkivet, p.45.

CONCLUSION

Applicant Tracking and Career Prediction System is the best HRIS module to help the HR personnel to have the best recruitment function. It automates the entire process of recruitment function of HR department which successively provides the simplest experience to the recruitment team and therefore the candidates. At the same time the issues in using ATCPS must be taken care off. Training HR personnel in technology will go a long way in automating the whole HR Process. In essence, the project will not only assist students in determining a suitable career domain but will ease the entire hiring process for the companies as well. Students may benefit from this software by receiving a suggestion of the field in which they should pursue their jobs. The entire tedious process of selecting candidates, shortlisting them and arranging interviews will become easier for the companies.

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