WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

Applicant Helper System for Resume Using Python And NLP

Lynsha Helena Pratheeba[1], Prajwal S[2], Pavan Kumar S[3], Naveen Kumar V[4], Nithin Krishna K[5]

[1]Assistant Professor, Department of Computer Science and Engineering, MVJ College of Engineering, Bangalore, Karnataka, India.
[2,3,4,5]Undergraduate Scholar, Department of Computer Science and Engineering, MVJ College of Engineering, Bangalore, Karnataka, India.

A B S T R A C T

AHS is a derivative of ATS. Finding the appropriate resources for each relationship between a resume and a job description is one of the primary tasks of an applicant tracking system (ATS). The AHS software development process is built on a natural language processing strategy. AHS software shows how to efficiently manage system resources, and more specifically how to address the demands of a job role search like compare, match, and highlight. With the Applicants Helper System, enrollment costs can be reduced while efficiency and fulfillment levels are increased. This is because NLP makes the processing of applications faster, easier, and more efficient. We process resumes saved in Word format by cleaning, extracting, and analyzing the text and fed into Natural Language Processing (NLP) module. By utilizing the user resume, this framework will specify a professional path for the student and guide him in choosing his resume design and information. The resultant outcome is either a matching or missing keyword from a resume, which is a critical point for AHS software design. The main goal is to stop the resumes from getting rejected and provide the idea for the users about their resume selection process.

Keywords: ATS, Resume, job role, NLP

1. Introduction

A resume communicates qualifications and brand, enquiring “Who you are and What makes you different?” to employers and recruiters. AHS makes difference from ATS. ATS is opted to filter out the resume which does not meet the job description or company requirements. But AHS helps to screen resumes before applying to any job domain. AHS provides a guide to help users make sure that their resumes are getting selected for the companies they desire. In a tough job market, users need a resume that helps user stand out in a sea of applicants. Ultimately, the purpose of a polished and targeted resume is to get the user an interview. ATS is software that manages and automates the hiring and recruiting process for organizations. It enables posting jobs, screening applications, sorting through resumes, and identifying strong candidates. Resumes are frequently scored and sorted using AHS software depending on how well they match job criteria using artificial intelligence (AI) and natural language processing. Candidates that successfully navigate ATS screening are then linked with recruiters or hiring managers to proceed to the following stages of the employment process. However, the issue is with the resumes that are being turned down. This is where AHS offers assistance to those in need. The whole point of an applicant Helper system is to improve the chances of resumes getting selected for the company. Keeping track of all applicant data (qualified or not) so you can access it later is also essential. It should handle tasks that don't necessarily require a human eye, bring the best talent to the surface, and pull top talent to the forefront. A lot of companies use applicant tracking systems (ATS), which compare your resume with the job description to determine whether you are qualified for the job. You not only have to impress the employer, but you must also impress the computer as well! Therefore, it is important to target your resume to the exact position you are pursuing if possible. In this sense, another goal of a resume is to illustrate how well your talents and experiences match those specified in the job description.

2. Literature Review

2.1 Applicant Tracking and Scoring System

Ankit Tiwari [1] Applicant Tracking and Scoring System used a different process in order to screen resumes. They used JSON to convert unstructured resumes to structured ones and then processed to OCR to look for the keywords. NLP is used Similarly to how it i s utilized in all ATS software. Logstash is used to gather, process, and generate the logs for centralizing and marking for real-time analysis. The resumes are further ranked based on the ranking algorithm provided by KNN classification.

2.2 An Approach to Extract Special Skills to Improve the Performance of Resume Selection

Sumit Maheshwari [2] An Approach to Extract Special Skills to Improve the Performance of Resume Selection follows a particular format of dividing resumes based on layer on priority called the three-level feature organization approach. In order to extract special features, they have used a degree of specialness. Then these features are organized into 3 levels. Then features are organized by setting similarity threshold (ST) value.

2.3 Implicit Skills Extraction Using Document Embedding and Its Use in Job Recommendation.

Akshay Gugnani [3] Implicit Skills Extraction Using Document Embedding and Its Use in Job Recommendation. This study describes a job recommender system for matching nonstandard and unstructured/semi-structured resumes to job descriptions (JD). To find probable skill phrases from the unstructured input language, they employed a skill extraction module to analyze both the applicant profile and the JDs. Then Parts of Speech tagger marks a word to a particular part of speech based on its context.

2.4 Resume Classification and Ranking using KNN and Cosine Similarity

Riza Tanaz Fareed[4] Resume Classification and Ranking using KNN and Cosine Similarity uses an NLTK tokenization for pre-processing and cosine similarity, stop words, and lemmatization to classify and rank the resume. To fully ensure that the underlying term is appropriately related to the language, lemmatization condenses derivative sentences. They used the Tf-Idf (Term Frequency, Inverse Document Frequency) to extract features from a pre-processed dataset. After transferring the cleaned data, Tf-Idf is used to extract features.

3. CONCLUSION

The problem with many ATS tools is only linked to the company HRs which is not open source. AHS, on the other hand, is an open-source program that anybody with a little technical knowledge may utilize. AHS offers the user the confidence to apply for a job at a certain company by directing their strengths and weaknesses. For this study, knowledge data about resumes in various text formats and file types were gathered., compared, and ranked. the user is given recommendations for the job role from their resume. An automated intelligent system will extract all relevant information from unstructured resumes and convert it to a standard structured format, which can then be graded for a specific job position and candidate based on necessity. The goal of this research is to increase the precision of data extraction from individual resumes. It is possible to acquire assistance in creating a stronger CV for users while lowering the likelihood of rejection from hiring managers and Internetbased recruiting firms. We intend to continue our work in the future and enhance this online application for the Android and iOS platforms, making it more user-friendly.

REFERENCES

[1] Ankit Tiwari, Sagar Vaghela, Rahil Nagar, Mrunali Desai “Applicant Tracking and Scoring System” International Research Journa l of Engineering and Technology (IRJET) Apr 2019

[2] Akshay Gugnani, Hemant Misra “Implicit Skills Extraction Using Document Embedding and Its Use in Job Recommendation” ThirtySecond Innovative Applications of Artificial Intelligence Conference (IAAI-20) 2020.

[3] Sumit Maheshwari, Abhishek Sainani, P Krishna Reddy “An Approach to Extract Special Skills to Improve the Performance of Resume Selection” 6th International Workshop on Databases in Networked Information Systems (DNIS2010)

[4] Zhuo Jiajing Meng Chen Liu Jinning “Research on the Resource Management in ATS” The Eighth International Conference on Electronic Measurement and Instruments ©2007 IEEE

[5] Riza Tanaz Fareed, Sharadadevi Kaganurmath “Resume Classifications and Ranking using the KNN and Cosine Similarity” International Journal of Engineering Research & Technology (IJERT) Vol. 10 Issue 08, August-2021

[6] Sreshtha, Bipul Vaibhav “ML-Based job resume matching algorithm” https://skillate.com/blog/how-does-ml-based-job-resume-matchingalgorithm- work-2 7 Oct 2021

[7] Gavrav Dutta “Resume Screening using machine learning”_https://www.kaggle.com/code/gauravduttakiit/resumescreening -using-machine-learning 21 jan 2022

[8] Tanishka Garg “ Best Approach For Resume screening by Machine Learning -Part 1” https://blog.knoldus.com/best-approach-for-resumescreening- by-machine-learning August 8, 2022

[9] Kajal Kumari “Resume Screening with natural language processing in python”https ://www.analyticsvidhya.com /blog/2021 /06/resumescreening- with-natural-language-processing-in-python 22 July 2022