

Smart Resume Analyzer

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Abstract: *Smart Resume Analyzer is a project aimed at simplifying the job recruitment process by automating the initial screening of job applications. The system utilizes natural language processing and machine learning techniques to analyze and extract relevant information from a candidate's resume. The extracted information is then used to evaluate the candidate's qualifications against the job requirements, providing a score that reflects their suitability for the position. The system also offers personalized feedback to candidates to help them improve their resumes and increase their chances of landing a job. Smart Resume Analyzer aims to streamline the recruitment process for employers and candidates alike, saving time and increasing the likelihood of finding the best-fit candidates for open positions. The software will be able to extract relevant information such as work experience, education, skills, and achievements, and match them against job descriptions to identify the best fit for the job.*

Keywords: Web Application, Resume Analysis, Hiring, Recruitment

I. INTRODUCTION

Smart Resume Analyzer is a project designed to make the job application process more efficient and effective for both job seekers and employers. In today's highly competitive job market, it can be challenging to stand out among the many applicants for a single position. Smart Resume Analyzer uses advanced artificial intelligence and natural language processing techniques to analyze and evaluate job candidates' resumes, providing valuable insights and feedback to both the job seeker and the employer. With this project, job seekers can optimize their resumes to better match the job description, while employers can quickly and accurately screen applicants, saving time and resources. The goal of Smart Resume Analyzer is to streamline the job application process and increase the likelihood of a successful job match for both parties.

With the help of NLP algorithms and machine learning models, the smart resume analyzer can scan and evaluate resumes quickly and accurately, enabling recruiters to focus on the most qualified candidates. The system can identify keywords, skills, and other relevant information to help recruiters match job requirements with candidates' qualifications.

By reducing the time and effort needed to evaluate resumes, the smart resume analyzer can significantly streamline the recruitment process, helping organizations save time and resources. Additionally, it can reduce the likelihood of human bias in the initial screening process, resulting in a more diverse and inclusive hiring process.

Overall, the smart resume analyzer project has the potential to transform the recruitment process and make it more efficient, objective, and effective.

II. LITERATURE SURVEY

2.1 Resume analyzer an automated solution to recruitment process

Company specific format of resume is provided to applicants by a particular company. Stringent rules are enforced by companies to simplify their information retrieval process. This method is helpful for companies as extraction and selection process complexity reduces. But it becomes time and energy consuming for the applicants.

Information retrieval through application form: A lengthy application form is mandatory before registering for the recruitment process. All the data available in resume is recurred in application form. Data redundancy is main issue with this solution.

2.2 Resume Screening

Pradeep Kumar Roy in their research [1], created a system where they can minimize the cost of hiring new candidates for the job positions in the company. They focused on 3 major problems in this process.

- 1) Picking the right candidates from the applicants
- 2) Making sense of their CV's
- 3) Finding out if the candidate is fit for the job role

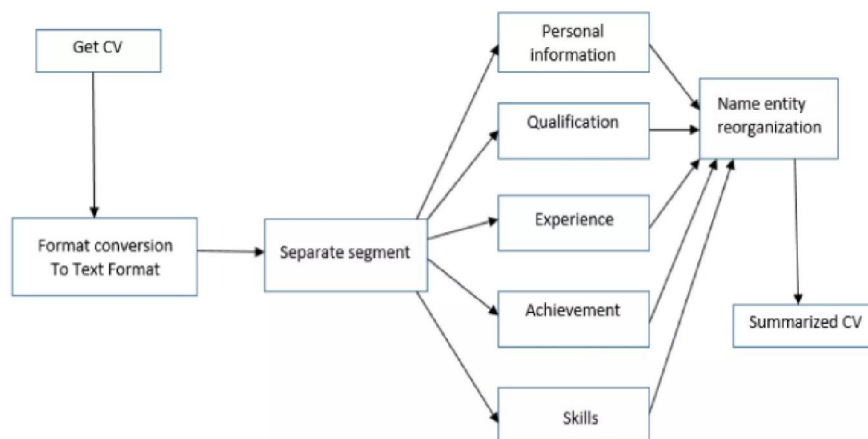
2.3 Resume Parser

Candidates' resumes are sorted according to the company's needs when they upload them. The organization can utilize the rating to choose the best candidates. The methods and model for this post will be given in four steps: gathering resumes and searching for keywords in the resume text's information base. Then, based on a rating score, candidates are ranked and categorized. In addition, this system may extract new keywords from resumes in order to broaden the knowledge base. In the IT recruitment process, information from Polish resume documents is extracted automatically.

III. SYSTEM DESIGN

To design a smart resume analyzer system, we need to consider the following components:

1. User interface: A web or mobile-based interface will allow users to upload their resumes, view the results, and perform various actions.
2. Resume parsing module: The system needs to extract data from the uploaded resumes, such as personal information, education, work experience, skills, and achievements. There are many open-source libraries and APIs available for this task.
3. Natural Language Processing (NLP) module: The system needs to analyze the extracted data using NLP techniques to identify the key skills and match them with the job requirements. This module can also identify the sentiment of the text, such as positive or negative, to determine the candidate's attitude.
4. Database: The system needs to store the extracted data and the analysis results in a database. This will allow for efficient searching and retrieval of resumes and help to build a knowledge base for future analysis.
5. Machine Learning (ML) module: The system can use ML algorithms to learn from the analysis results and improve the accuracy of the skill matching. This module can also provide recommendations for the job seeker to improve their resume based on the analysis results.
6. Job Matching Module: The system can use the matched skills to find relevant job opportunities for the job seeker.
7. Analytics module: The system can provide analytics on the resume data to help companies make better hiring decisions, such as identifying trends in skillsets or evaluating the effectiveness of different job postings.
8. Security and Privacy: The system should follow industry standards for security and privacy to protect the sensitive information in the resumes.

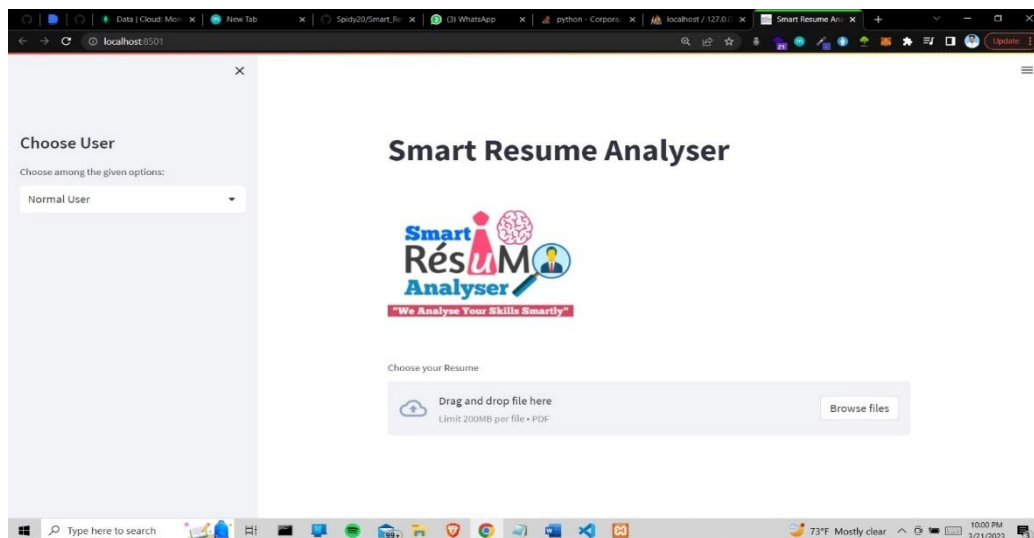


System Design

Overall, a smart resume analyzer system can be a useful tool for job seekers and employers alike. It can help job seekers identify skills that they may have overlooked and find relevant job opportunities. For employers, it can streamline the resume screening process and help them find the best candidates for their job openings.

IV. SYSTEM IMPLEMENTATION

The proposed system includes a main page that is designed to provide an attractive user experience. The main page includes two columns one is for switching module and other is for upload a resume. In resume upload columns user must upload their resume in pdf format then the system analyzer the resume and give u the analysis within seconds. We are just taking resume as the input from the applicants and all the details about the applicants is extracted from the resume. Also, this project has a admin module through which admin can login into the system and have all the records of the resume uploaded by the user. In admin module the user data is represented in the form of table these table contains the information like name email resume score and profession



V. FUTURE SCOPE

Smart resume analyzer is an excellent project that has the potential to revolutionize the hiring process by making it easier for employers to find the right candidates for the job. Here are some potential future scopes for the project:

1. Incorporating Artificial Intelligence: One of the most promising areas of development for smart resume analyzer is the incorporation of artificial intelligence (AI). By using AI algorithms, the system can analyzer resumes more effectively, extract more relevant information and provide better insights to the employers.
2. Integration with Applicant Tracking Systems (ATS): Another potential area of development is the integration of smart resume analyzer with applicant tracking systems (ATS). By doing so, recruiters can easily filter through large volumes of resumes and save time while hiring.
3. Language Translation: Another potential feature is adding language translation functionality to the system, allowing recruiters to analyzer resumes in different languages.
4. Integration with Social Media Platforms: Smart resume analyzer can also be integrated with social media platforms such as LinkedIn, allowing recruiters to gather more information about candidates and get a more comprehensive view of their skills and experience.

V. CONCLUSION

In conclusion, the Smart Resume Analyzer project is a powerful tool that uses advanced technology to automate the process of resume screening and analysis. By leveraging natural language processing (NLP) and machine learning (ML) techniques, the system is able can to extract key information from resumes and provide actionable insights to recruiters and hiring managers.

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