

## Resume Analyzer

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### ABSTRACT:

The aim of this project is to design and develop a tool that results into an easy and helpful solution for applicants as well as recruiters “AI RESUME ANALYZER” which parses information from a resume using natural language processing, finds the keywords, cluster them onto sectors based on their keywords And lastly show the recommendation, prediction, analytics to the applicant / recruiter based on keyword matching.

### 1.Introduction:

Corporate companies and recruitment agencies process numerous resumes daily. This is no task for humans. An automated intelligent system is required which can take out all the vital information from the unstructured resumes and transform all of them to a common structured format which can then be ranked for a specific job position.

Parsed information includes (name, email address, phone number, work experiences, education, hobbies, interests, achievements, certifications, projects) keywords and finally the cluster of the resume (ex: Web Development, Data Science etc.). The parsed information is then stored in a database (MySQL in this case) for later use.

### Motivation:

Key motivations for the project include:

-Efficiency in Recruitment Processes: Many organizations receive a large number of job applications for each position advertised. Manually reviewing each resume can be time-consuming and prone to bias. Automating this process with a resume analyzer can significantly increase efficiency by quickly filtering out irrelevant or unqualified resumes.

-Objective Screening: Human recruiters may inadvertently introduce bias into the screening process based on factors such as the candidate's name, gender, or educational background. By using an automated resume analyzer,

organizations can ensure a more objective screening process based solely on the qualifications and experience outlined in the resumes.

-Improving Candidate Experience: Candidates often spend significant time crafting their resumes to highlight their skills and experiences. A resume analyzer can provide instant feedback to candidates on how well their resumes match the job requirements, allowing them to make improvements before submitting their applications. This can enhance the overall candidate experience and increase the likelihood of attracting top talent..

### Objectives:

The aim is to design and develop a model that can parse information from unstructured (pdf) data, and transform it to JSON for furthermore processing .

A tool that analyses applicants resume and transform it to a structured JSON format, using parsing techniques and some programming fundamentals .

Which can be used by any organization (company/college/individual user) that handles resume screening process To keep a track of all records into database for further admin side analytics.

And also, to provides tips and recommendations based on applicants resume.

### Purpose and Scope:

#### Purpose

- i. Research shows that 90% of all CVs/ Resumes are checked for much less than 2 minutes via the employers.
- ii. This implies that in a maximum of the instances recruiters simply study the bits of critical components or the points of interest within the Resumes and ignores the rest. Therefore, the first goal was to make a tool that covers all the parts in a resume and keeps a track of all records within minimal time span .
- iii. To make it applicant's friendly and supportive by providing them predictions and recommendations .
- iv. To make it recruiter friendly by providing them user data and export it to csv, and also to provide insights and analytics.

#### Scope

- i. It can be used for getting all the resume data into a structured tabular format and csv as well, so that the organization can use those data for analytics purposes .
- ii. By providing recommendations, predictions and overall score user can improve their resume and can keep on testing it on our tool.
- iii. And it can increase more traffic to our tool because of user section iv. It can be used by colleges to get insight of students and their resume before placements..
- iv. Also, to get analytics for roles which users are mostly looking for.

**Present System:**

The process of hiring has evolved over the period of time. In the first-generation hiring model, the companies would advertise their vacancies on newspapers and television. The applicants would send in their resumes via post and their resumes would be sorted manually. Once shortlisted, the hiring team would call the applicants for further rounds of interview. Needless to say, this was a time-consuming procedure. But the industries started growing and so did the hiring needs.

Hence the companies started outsourcing their hiring process. Hiring consultancies came into existence. These agencies required the applicants to upload their resumes on their websites in particular formats. The agencies would then go through the structured data and shortlist candidates for the company. This process had a major drawback. There were numerous agencies and each had their own unique format.

To overcome all the above problems an intelligent algorithm was required which could parse information from any unstructured resumes, sort it based on the clusters and rank it finally.

Continuously monitor the performance of the deployed model and update it as necessary to adapt to new types of deepfake techniques or changes in the data distribution.

**Conclusion:**

An applicant cum recruiter-based Quick and easy to use Resume Analyzer. That analyze resume data and extract it into machine-readable output. Helps applicants with recommendations, prediction and analytics. Helps recruiter by automatically store, organize, and analyze resume data to find the best candidate. Can be widely used by any organization to analyze and get insights of a resume.

**Future Works:**

Add more fields for other roles, and its recommendations respectively. Ranking out the resume based on score and view individual user details. Decide more accurately and authentically, whether or not to offer candidate a job.

**References:**

-NLTK (Natural Language Toolkit): A popular Python library for NLP tasks such as tokenization, stemming, tagging, parsing, and more.

-spacey: Another powerful Python library for NLP, providing efficient tools for text processing and analysis.

Scikit-learn: A simple and efficient tool for data mining and data analysis. It provides various machine learning algorithms and utilities.

TensorFlow: An open-source machine learning framework developed by Google for building and training neural networks.