Personality Prediction System Through CV Analysis

PROBLEM STATEMENT

Designing an automated system to extract information from unstructured resumes and transform that information to structured format. And ranking those resumes based on the information extracted, according to the skill sets of the candidate and based on the job description of the company. The system analyzes, scores and ranks a collection of PDF resumes using machine learning.

DESCRIPTION

- This software enables a more effective way to short list submitted candidate CVs from a large number of applicants providing a consistent and fair CV ranking policy, which can be legally justified.
- System will rank the CV's based on the experience and other key skills which are required for particular job profile.
- This system will help the HR department to easily shortlist the candidate based on the CV ranking policy for a job profile.
- This system will help the human resource department to select right candidate for particular job profile which in turn provide expert workforce for the organization.

INPUT

Resume of the applicants, of which, the following components will be considered:

- Category score (what field one's resume seems best suited for)
- Overall score (how well one's resume scored across different fields)
- University score (how high one's school is ranked)
- Word count (if one's resume has too few words or too many words)
- Word count per section, i.e. Experience, Leadership, and/or Projects
- Degree score (if one has a degree required for the position - mostly based on user input)

OUTPUT

A Latex file with the results filed by resume email and a total score at the bottom.

WORK DISTRIBUTION

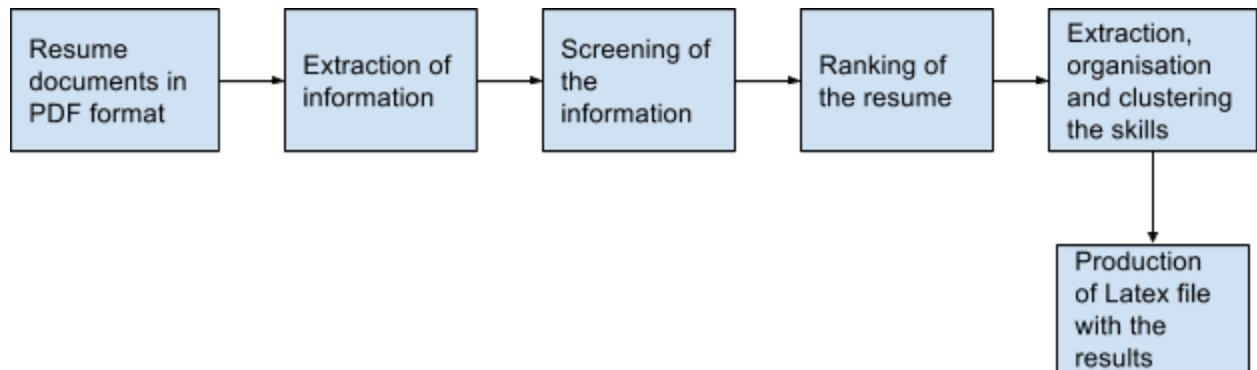The system comprises of 2 major modules with their sub-modules as follows:

Admin:

1.Login: Admin need to login with its valid credentials to access the below modules.(Nihala)

2.Add Personality Questions: Here, admin can add all the personality related questions.(Prerana)

3.Add Aptitude Questions: Admin can add aptitude questions of the interest of the company to judge the candidate's capability.(Aparna)

4.Add Job Details: Admin or any authorized person can add the requirement or job details on behalf of company. System allows admin to job details such as position, experience, salary, etc.(Nihala)

5.Preferred CV's: Admin will add some CV's which are preferable and will be used to shortlist the scanned CV's.(Prerana)

6.Scan CV: Admin can scan CV's received from candidates which will undergo the process of shortlisting the CV's. Based on the company requirement, the candidate who have submitted their CV to admin or any authorized person, will be uploaded by the admin into the system.(Aparna)

7.Shortlisted CV's: Here, all the shortlisted CV's of candidates will be displayed. The shortlisting of CV's is performed by system itself.(Nihala)

8.View Candidates: Can view all the registered candidates with its details.(Aparna)

9.View Result: Can view the results of individual candidate, which can be easy to admin or concern person to select a desired candidate.(Prerana)

Candidate:

1.Registration: To access the below given modules, candidate must fill up registration form and create login credentials in order to get the access to the system. While registration process, candidate need to upload their CV.(Aparna)

2.Login: Candidate need to enter valid credentials to access the below given modules.(Nihala)

3.Give Test: After successful login, candidate can now proceed with online test based on personality and aptitude.(Prerana)

4.View Results: Once the test is completed by the candidate, the results will be displayed.(Aparna)

BLOCK DIAGRAM

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│ Resume       │     │              │     │ Screening of │     │              │     │ Extraction,  │
│ documents in │ ──> │ Extraction of│ ──> │ the          │ ──> │ Ranking of   │ ──> │ organisation │
│ PDF format   │     │ information  │     │ information  │     │ the resume   │     │ and clustering│
│              │     │              │     │              │     │              │     │ the skills   │
└──────────────┘     └──────────────┘     └──────────────┘     └──────────────┘     └──────────────┘
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                                                                                     │ of Latex file│
                                                                                     │ with the     │
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Tools
Django platform will be used for the development. Its installation steps follow: