Resume Parser NLP Spacy Python

Abstract:

Screening resumes out of bulk is a challenging task and recruiters or hiring manager wastes lot of their valuable time by searching through each and every resume. Often resumes are populated with irrelevant and unnecessary information. Therefore, the process of parsing thousands of resumes manually consumes a lot of time and energy thereby it makes the hiring process expensive. In traditional hiring, resume screening is a manual process which consumes a lot of time and energy.

In this project the process of screening resumes is automated by using advanced Natural Language Processing which is a field in Machine Learning. Our model helps the recruiters in screening the resumes based on job description within no time. It makes the hiring process easy and efficient by extracting the required entities automatically by using Spacy NER model from the resumes and then generates a graph displaying the score of each and every resume. Based on the scores recruiter can choose the required candidates without rummaging through piles of resumes from unqualified candidates.

Existing System:

A resume is a brief summary of our skills and experience over one or two pages while a CV is more detailed and a longer representation of what the applicant is capable of doing. A Machine Learning model is needed for the recruiters for easy accessing.

Resumes are a great example of unstructured data. Since there is no widely accepted resume layout; each resume has its own style of formatting, different text blocks, or even category titles do vary a lot and don’t even need to mention how big a challenge it is to parse multilingual resumes.

Proposed System:

Earlier, being under the pressure of higher authorities, Recruiters are forced to spend more time on analysing and matching thousands of resumes with the Job descriptions in order to select required candidate. Being in a mad rush of getting jobs, a fresher may apply for an irrelevant job in such scenarios one need to spend more time to analyse the resumes according to the requirements of the company .So in order to place a “Right person in a Right job”. An intelligent resume ranking system is required to shortlist the candidates based on job description within no time.

The problem is that the present system is not very flexible and efficient and time saving as it is not guaranteed that only eligible candidates will upload their resumes for a particular company. So out of a bulk of relevant and irrelevant resumes the recruiter has to scrutinize them. Our system saves time for the recruiters to scrutinize the resumes based on job description by automatically ranking the resume. This not only helps the recruiters for scrutinization but also it helps the candidate will be satisfied because he will get a job in that company which really

appreciates candidates skill and ability. Learning to rank refers to machine learning techniques for training the model in a ranking task. Learning to rank is useful for many applications in Information Retrieval, Natural Language Processing, and Data Mining. Intensive studies have been conducted on the problem and significant progress has been made. This short paper gives an introduction to learning to rank, and it specifically explains the fundamental problems, existing approaches, and future work of learning to rank.

Software Tools:

1. NLTK
2. Spacy
3. VS Code
4. Scikit-Learn
5. Jupyter Notebook
6. Colab
7. Anaconda
8. Pandas
9. NumPy
10. Matplotlib
11. Python3

Hardware Tools:

1. Laptop
2. Operating System – Windows 11
3. RAM – 16GB
4. ROM – 4GB
5. Fast Internet Connectivity