

Resume Parser Questionnaire (RPaQ)

Problem

Over the last decade, many companies have adopted the FAANG style interview process for various software engineering positions. The interviewers end up asking such questions from the candidates which they might not have experience. This leads to various problems.

1. Asking the wrong or repeated questions to candidates.
2. Judging the candidate on something (s)he has never done before.
3. The inconsistent approach between candidates as every candidate is different from another.
4. Manually scanning the candidate's resume to figure out a suitable question for them.
5. The process is laborious when multiple interviews are planned in a day.
6. Not making the interview process enjoyable for the candidate.
7. Poor company branding

This often results in a bad experience for the candidate and the interviewer in return ends up judging the candidate on the wrong parameters.

'The class of problems that are by far the most challenging is dynamic programming. This is due to a combination of dynamic programming being rarely used in day-to-day work, and the difficulty of finding a solution in a short amount of time, when not having prior experience with this method.'

- Shared by Noga

Proposed Solution

There are numerous ways by which we can make our interview process seamless. The behavioral aspects are not something which is discussing here. Some of the ways via which technical aspects can be made better are mentioned below.

1. Asking a question that is relevant to the candidate's work experience
2. The problem should be solved within the available time
3. The interviewer needs to scan the candidate's resume before the interview and then come up with relevant questions

4. The scanned keywords from the resume will help the interviewer to ask relevant questions.

Taking an example, if the resume reads about a project mapping DNA sequences, (s)he can be given a coding question for pattern matching.

But again this will be all manual process and this will have to be done by the interviewer every time before an interview which will not solve the problem of tiring the interviewer.

Automated System to the Rescue

This is not a problem faced by one individual but everyone in the industry. If we are to develop a solution that would help everyone, would that not be great.

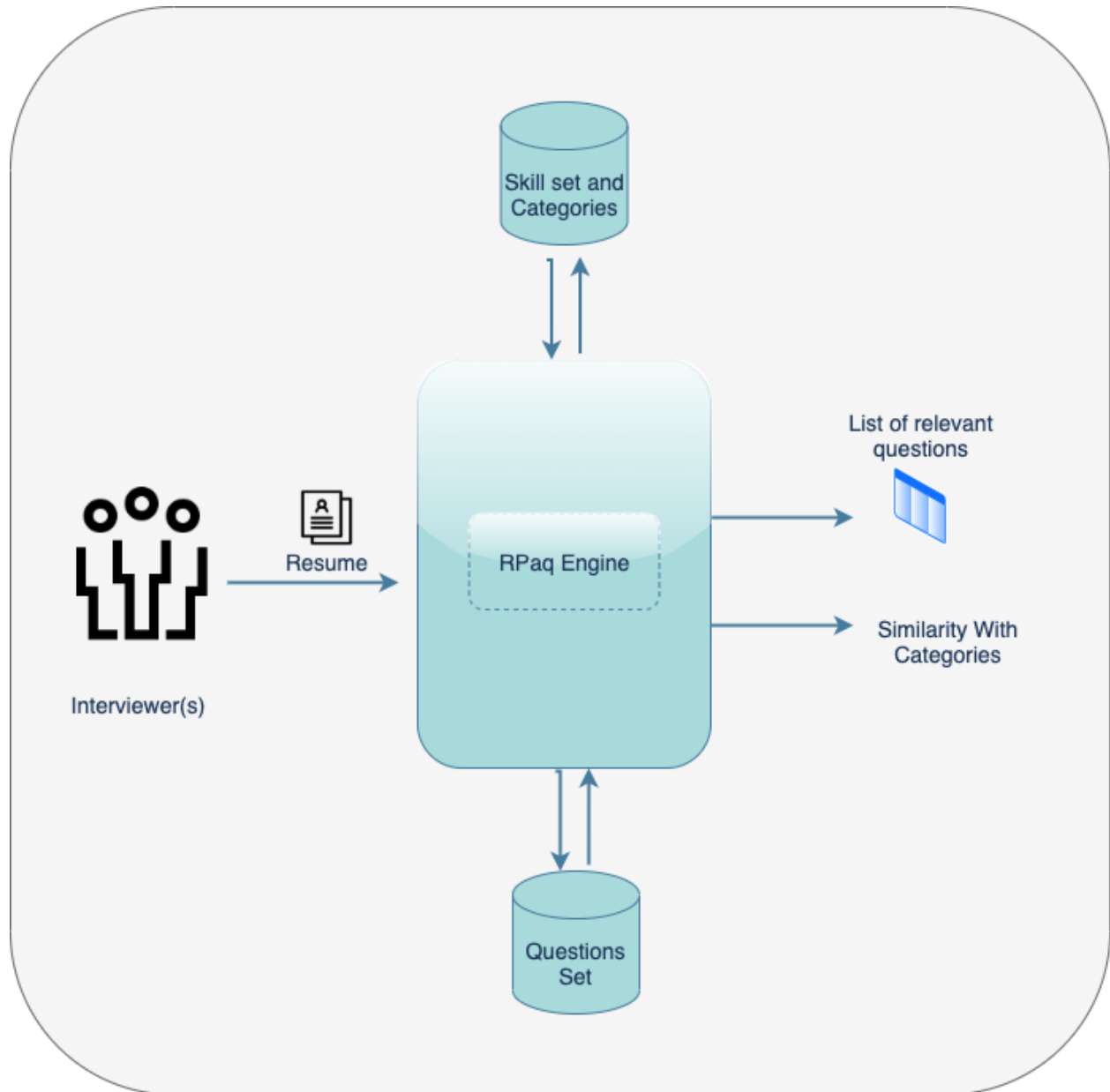
So, we **Learned From Reality** and have done a small POC which makes this process smooth and interesting for the interviewer.

The candidate's profile is scanned and a list of skills (Tech/Domain) are identified using a parser. Based on these skills, level, and type of interview round(Coding/Managerial) - a list of suitable questions is recommended. The interviewer may select questions from this list.

Our system is based on the following steps of progress.

1. We are first using a parser to extract all the skills from a candidate's resume or directly take input of words to get relevant questions.
2. These skills are now mapped to a technical category like Automation/Pipelines, Frontend, Backend services, Database, etc
3. All the identified skills/words from (1) are used to show a graphical representation of similarity with the categories defined in (2).
4. On the other hand, we have a big questions pool with tags associated. Already one document with quality questions added by Compass folks is shared [here](#).
5. The most matched category is now used to match the questions. Based on the identified question keywords, all the matching questions are visible to the interviewer on the screen.
6. They can now select the type of question-based on the round (Coding/Manager) and simply ask the candidate.

Design



Advantages

1. The time and effort required to scan each resume manually.
2. The process of asking only relevant questions to the candidate.
3. It will play one of the key roles in [Recruiter Assistant](#).
4. [Technical Interview Guidelines](#)
5. Not only the interviewers, but the recruiters can also benefit from this. They will be able to screen candidates based on the similarity graph of skills required vs what they have to offer.
6. We can take this full fledged system to sale to any recruiter organisation

Future Scope

1. No need to upload a resume. We can directly link candidates' resumes from the greenhouse and the entire system works by itself.
2. Question Bank - A good set of questions with proper tagging can be worked upon
3. Training model to understand various technologies and categories.
4. Suggestions while typing in words in the input box.

References

1. [Rule-based matching · spaCy Usage Documentation](#)
2. [AMAZON Job Skills](#)
3. [Google Job Skills](#)
4. [Measuring the Document Similarity in Python:](#)
5. [Word Mover's Distance — gensim](#)
6. [Gensim. models.Word2Vec.wmdistance](#)
7. [Career Cup Questions](#)