

# VIRTUAL INTERVIEW MANAGEMENT AND CANDIDATE EVALUATION SYSTEM

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**Abstract**— The Virtual Interview Management and Candidate Evaluation System is a system that can simplify and streamline the process of interviews with the help of an online system. Interviewing a vast number of candidates in most companies is a time-consuming and arduous process. Scheduling, questioning, and controlling the performance of every candidate might also be a challenge. This project offers an easy solution since the interviews can be done online. Under this system, candidates are allowed to have their resumes uploaded, register and log in. Once they have chosen the job role, interview questions associated with the job role are offered. The platform will enable it through which the candidates can read the questions and send their answers to the platform, which will enable them to be interviewed anywhere. The system also assists recruiters to read through responses of candidates and verify their performance. The system stores all interview information, responses, and scores so that recruiters can easily view and compare the candidates and then pick the right candidate

**Keywords**— *Natural Language Processing, Automated Question Generation, Resume Parsing, Web-Based Application.*

## I.INTRODUCTION

Traditional interviews are also characterized by numerous challenges to the candidates. They might be required to commute to attend interviews and this can be very expensive and stressful. In some cases, interviews are postponed or re-scheduled, this poses as an inconvenience to both job seekers and human resource. Due to these issues, most organizations are currently shifting towards the online interview systems whereby interviews can be done remotely.

The Virtual Interview Management and Candidate Evaluation System assists in overcoming these issues by offering an easy and effective online system to carry out interviews. Candidates are able to do so in this system register and log in to the site with their information. Once they log in they are able to post their resumes and select the job position that they are applying to. The system then gives interview questions in regard to the role chosen. Applicants are able to view the questions and provide their responses via the site. This system assists candidates to attend interviews anywhere through the use of a computer device or a mobile device but must have an internet connection. It saves time and minimizes traveling. This can enable candidates to carry out their interviews in their comfort, hence allowing them to perform better.

In the case of recruiters, the system streamlines the interview process and makes it more manageable. Recruiters are able to see the details of a candidate, resume and answer to interview questions in a single location. All the information is stored in a database in the system and this makes recruiters review and compare various candidates easily. This assists them in making more decisions and choosing the right person to take up the job. Candidate evaluation is another key aspect of this system. The system stores candidate responses and assists recruiters to review their performance. Through the responses, the recruiters are in a position to know the knowledge, skills and communication skill of the candidates. This simplifies the evaluation process and makes it more organized. The system also aids in lessening manual labor. All the documents and interview schedules are kept and handled in a computer, rather than manually. This enhances efficiency and saves time and energy by organisations.

In general, the Virtual Interview Management and Candidate Evaluation System offers a convenient and efficient answer to the current hiring requirements. It enhances the interviewing process because it is faster, organized and less tedious to the recruiters as well as the candidates. With the assistance of this system, the companies will be able to conduct interviews with ease and choose the right personnel in an easier and more efficient manner.

## II.RELATED WORK

Many researchers have conducted studies on the concept of technology in the recruitment process. The internet and digital tools have expanded and this has led to the development of numerous systems that are used to conduct interviews in a more convenient and expedited manner. Scholars have paid attention to the web-based interview systems, automated systems to assess candidates,

and artificial intelligence in human resource management. Some significant research on virtual interview systems and candidate assessment is described in the below literature review.

The application of online interview platforms has been an area of research by many researchers to enhance the hiring process. Conventional interviews involve the presence of both the candidates and the recruiters in one place, which is time and resource consuming. Online interview systems enable a candidate to be interviewed anywhere over the internet. Such systems assist companies in holding their interviews faster and handling a great number of applicants without difficulties. Researchers discovered that virtual interview platforms also save on the cost of travelling and it also makes the recruitment process flexible.

The other field of research is automated interview management systems. Such systems assist an organization to schedule interviews, store candidate information and handle interview data under a single roof. Scholars have demonstrated that automated systems minimize the amount of manual work and assist the recruiter to schedule interviews in an effective manner. Candidate information, interview questions, and evaluation results are also recorded with the help of such systems, which makes the recruitment process more organized.

The use of Artificial Intelligence (AI) in interviews has also been researched by the researchers. AI can be used to formulate interview questions depending on the job skills and skills of the candidate. It is also able to scan candidate responses and give simple evaluation results. Several studies claim that AI-based interview systems could aid in enhancing consistency in the evaluation process since all candidates are evaluated on the same criteria. This minimizes human bias and assists recruiters to make equitable choices.

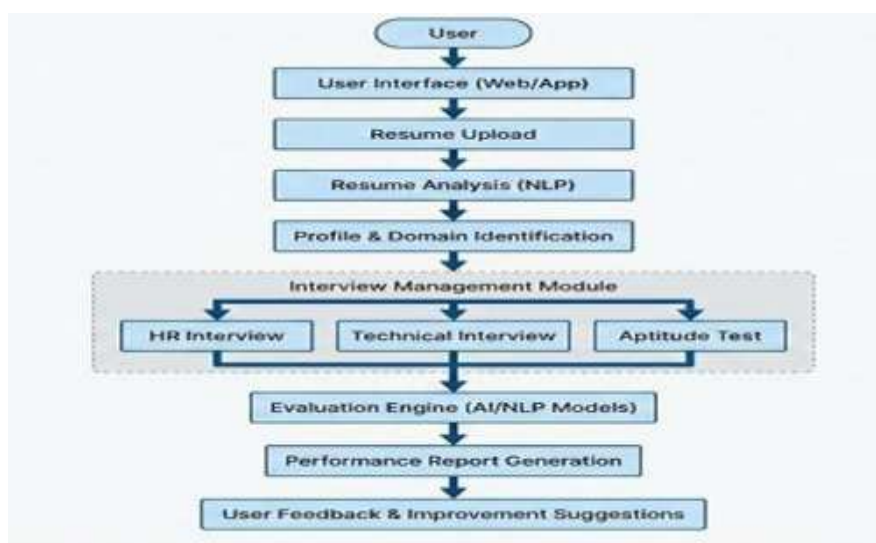
Candidate performance evaluation is another research area. In numerous studies, the researchers describe the way in which digital systems are able to document the reactions of the candidates and deliver assessment reports. These systems assist the recruiters to know the weaknesses and strengths of the candidates through analyzing their responses, communication abilities and level of knowledge. The researchers discovered that the automated evaluation tools speed up the selection process and enhance its accuracy.

Video-based interview systems have also been researched by some researchers. The systems enable candidates to capture video interviews to questions during the interview. The recorded videos will be assessable later by recruiters and allow them to assess the communication skills, confidence, and presentation that a candidate possesses. Video interview systems are very popular among most companies as they enable a recruiter to study interviews at any given time without necessarily having to get on-the-job interviews with all applicants.

Moreover, some of the studies explain the significance of data storage and management in recruitment systems. Digital interview systems archive the candidate data, resume, interview feedback, and assessment outcomes in a centralized database. This assists organizations in monitoring the performance of the candidates and keep appropriate records that could be referred to in the future. Researchers also stress that an effective database structure enhances the performance of the entire recruitment process.

### III. MATERIALS AND METHODS

The Virtual Interview Management and Candidate Evaluation System is operated in a few easy steps. The following steps outline the process by which the system is utilized by the recruiters and candidates.



**1. User Registration:-**

The candidate, first, establishes an account within the system with minimal information including name, email and password. The candidate is able to log in to the system, after registration.

**2. log on to the System:-**

Once the candidate has created an account, he or she logs in with his or her username and password. This enables them to get the interview platform.

**3. Resume Upload:-**

After being logged in, the candidate posts his/her resume. The resume includes details of the education, skills and experience of the candidate.

**4. Job Role Selection:-**

The job candidate picks the job position to which he/she is applying. According to this role, the system gives interview queries concerning the field.

**5. Interview Process:-**

The questions are read and the candidate enters his responses using the system. The responses are stored and documented in the system

**6. Candidate Evaluation:-**

Recruiters check and examine the responses of the candidate. This will make them know the knowledge and skills of the candidate.

**7. Result and Record Storage:-**

All interview information, responses and assessment data is saved in the system. This information can be later reviewed by the recruiters and compared between different candidate.

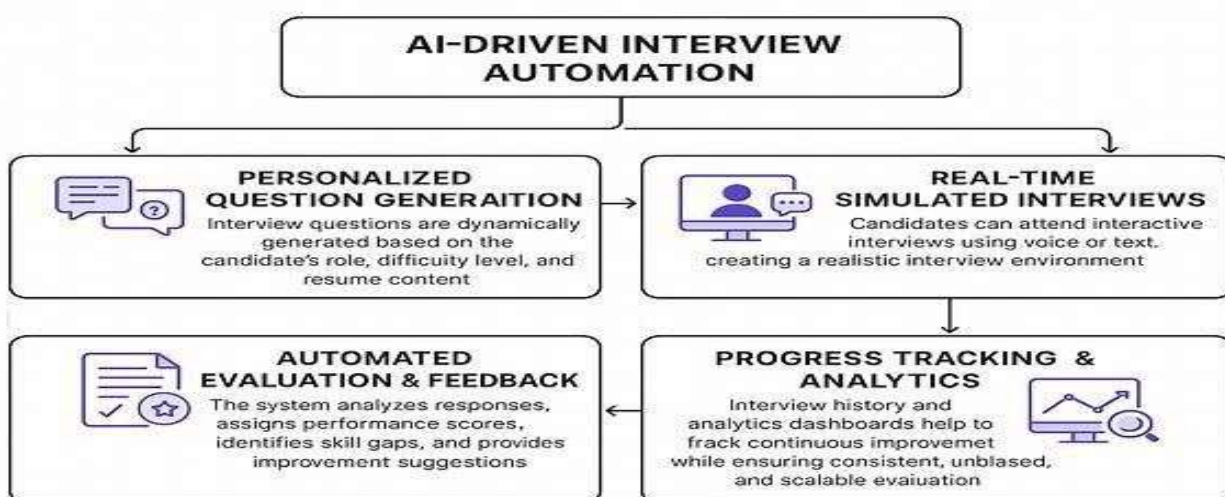
**User Interface :-** This is the component of the system that the users can see and use. This interface is used by both the candidates and recruiters as they interact with the system. Applicants are able to subscribe, log in, post resumes and respond to interviewing questions. Recruiters will be able to access information about their candidates to check their interview responses.

**Application Logic :-** The back-end is the major working area of the system. It determines the functioning of the system. It processes the user request, interview questions and the interview process. On submitting of answers, the information is processed and stored on the backend.

**Database :-** All the significant information in the system is stored in the database. It stores data like candidate information, resume, interview questions and answers and evaluation scores. This enables the recruiters to have access to the information at any time.

**Admin or Recruiter Module :-** This is to be used by recruiters or administrators. They will be able to handle job positions, check candidate responses, verify interview performance and hire the right candidates.

**Candidate Module :-** This is one that is used by candidates. Through the system, they are able to register, log in, post resumes, attend interviews, and post their responses.



**SYSTEM ARCHITECTURE**

**IV. PROBLEM IDENTIFICATION**

The interview process in most companies remains to be carried out in the conventional manner. Applicants are requested to visit the company and take part in the face-to-face interview. When there are a lot of applicants to the same position, the

company would find it hard to accommodate all the interviews. It is time consuming and laborious to manage the dates of interviews, call the candidates and monitor their performance.

One of the issues is that the process of interview is too long. Recruiters have to see the candidates individually. With numerous candidates, the interviews cannot be done in a short time. This may delay the recruitment process. Candidates information is another issue. Firms get numerous applications and information about various applicants. When information is done manually, it may be difficult to keep all this information safe and organized. There can be loss or confusion of information.

Another issue with many applicants is travel. There are also applicants who reside miles apart the company and have to drive long distances to have the interview. This may be costly in terms of money and time. In some cases, candidates might fail to attend the interview due to inability to travel on the specified date.

Candidate performance is also a problem of checking the performance appropriately. Various interviewers could ask various questions and have various opinions about the candidate. Due to this, it can be hard to evaluate all the candidates equally. The other problem is that records of interviews are not stored well. The company might not be able to locate the information in case it wishes to review the performance of a candidate in future.

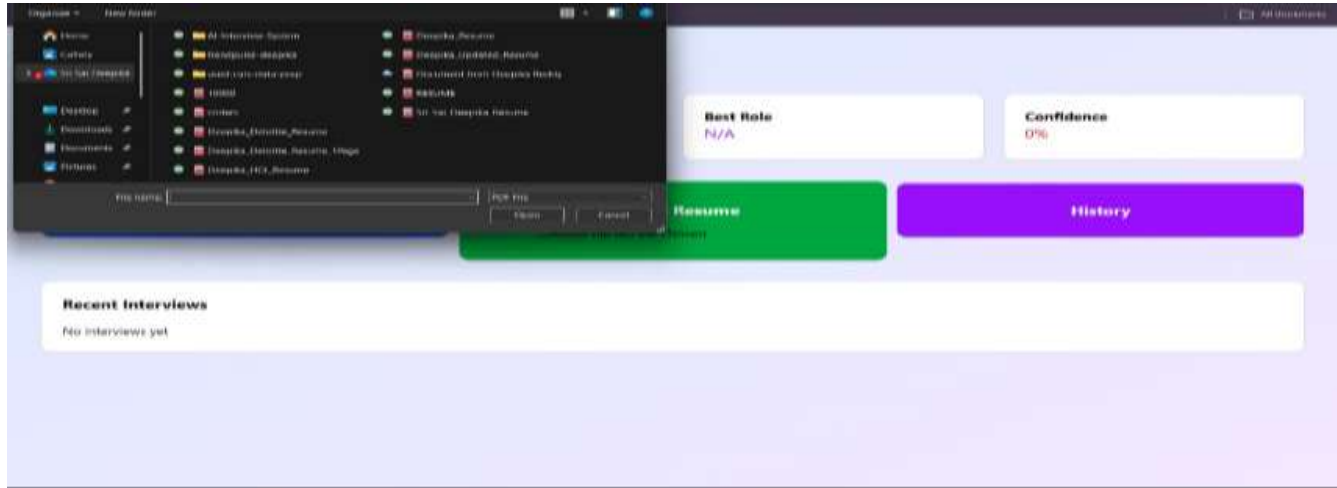
Due to all these issues, companies require a more convenient and efficient method of carrying out interviews. The following problems can be addressed with the help of an online interview system: candidates can participate in interviews at any place and all information about the interview is stored in one place. This simplifies the interview process by the companies and the candidates.

## V.OBJECTIVES

- 1.To make the interview process easier :-The system will ensure that both companies and candidates have a simple time in the interview process as the interviews can be carried out online.
- 2.To save time in recruitment process :-The system assists in saving time which was spent in organising and carrying out interviews by handling all this by means of an online platform.
- 3.To enable the candidates to participate in interviews anywhere:- Through the internet, the candidates are able to attend interviews in any place, therefore, not requiring them to travel to the company.
- 4.To arrange information about the candidates appropriately:- This system ensures that candidate information, resumes, interview responses are all stored in a single location to ensure that they are easily accessed by the recruiters.
- 5.To assist the recruiters in analyzing applicants comfortably:- The system captures the answers of the candidates and assists recruiters to analyze their performance and pick appropriate candidates.
- 6.To minimise the manual aspects of managing interviews:-The system also automates a lot of activities like information storage, and handling interviews that saves on paperwork and manual labor.
- 7.In order to streamline the interview process:-This is because the recruiters can easily go through the data of all the interviews and compare them before deciding to hire an employee by retaining this information in the system.

## VI.CONCLUSION

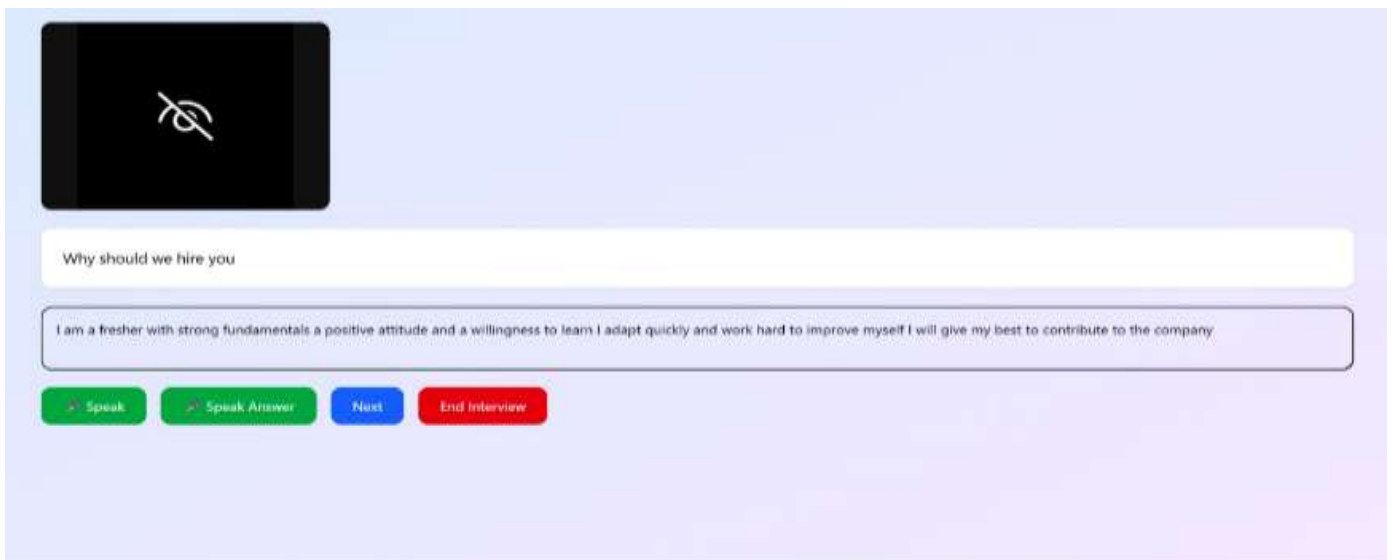
The implementation of the Virtual Interview Management and Candidate Evaluation System clearly shows an improvement on traditional interview methods. The system has been tested for different users including the candidates and recruiters for the assessment of its effectiveness, usability and performance. The results show that the system significantly reduces the time required to carry out interviews. Scheduling and coordinating interviews for several candidates is typically a lengthy, complicated process. But in this system, the candidates can attend the interview any time and from any place, thus eliminating the scheduling conflicts and delays. This flexibility improves overall efficiency of the recruitment process. This allows for the comparison of multiple candidates, since it gives you all candidate responses and performance reports in one easy place. The performance reports generated by the system (as seen in the workflow on page 5) are useful, as they highlight any strengths and weaknesses a candidate may have providing recruiters with an efficient way to select and mark those candidates as most suitable.



### Resume Upload

Another important outcome that was observed was the improvement in the organization and management of data. All candidate related information such as resumes, interview responses, and evaluation scores are stored in a centralized database as depicted in the system architecture. This means that recruitment can access and compare candidate data without confusion or loss of information. The digital storage system also guarantees improved security and long term record.

The evaluation process has also become more structured and consistent. In traditional interviews, different interviewers may judge candidates on personal judgment and this can lead to bias. Rather, this system allows recruiters to review responses in a common format.



### Interview Outlet

Moreover, incorporating AI/NLP-based assessment (seen in the architecture diagram) aids to gaining a much more impartial candidate response analysis and improve selection fairness.

The applicant experience is also improved by the system. Further, the candidates are not required to go far places for interviews or wait for interview schedules. They can attend interviews via desktop or mobile with an Internet connection. This lessens the pressure and increases candidate performance. This allows recruiters to get a better picture of what potential candidates can do.

Its easy decision making point-of-view from the recruiter side. This allows for the comparison of multiple candidates, since it gives you all candidate responses and performance reports in one easy place. The performance reports generated by the system (as seen in the workflow on page 5) are useful, as they highlight any strengths and weaknesses a candidate may have — providing recruiters with an efficient way to select and mark those candidates as most suitable.



**Dashboard**

Nevertheless, it is important to mention some limitations encountered in the testing. Heavy dependence on the availability of internet. Performance might be sub-optimal in low bandwidth areas.

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