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PrepWise: An AI-Based Interview Preparation Platform

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Abstract - *Preparing for an interview is very important for your career growth, but many people don't have access to tailored, organized, and realistic practice for interviews. Traditional ways of preparing, like using fixed question lists and practice interviews, don't give personalized feedback or evaluate skills based on specific job roles. To fix these issues, this paper introduces PrepWise, an AI-powered tool that helps people prepare for and practice interviews. It creates realistic interview situations and gives automatic feedback to help users improve. The system lets users pick the area they want to interview in and choose how hard the questions should be. Then it creates suitable questions for them to answer. Users can send in their answers and get immediate feedback on how they did. The system uses web technologies along with AI methods to look at how users respond and give useful feedback, which helps keep improving over time. PrepWise is set up as a web-based program so that it can be easily accessed, handled by many users, and used without much difficulty. The platform is designed to help people get better at interviews by providing organized practice, instant feedback, and ways to keep track of their progress. Studies show that this system helps users get more involved and prepares them better for interviews than usual ways. The suggested approach shows how AI systems can help with preparing for a career and evaluating skills.*

***Key Words*: Interview Preparation, Artificial Intelligence, Web Application, Automated Evaluation, NLP, Career Guidance**

1. INTRODUCTION

Preparing for an interview is a very important part of the hiring process, because it plays a big role in helping a job seeker get hired. Many candidates have enough technical skills but still find it hard to do well in interviews because they don't practice in a structured way, lack confidence, and don't get timely feedback. Traditional ways of preparing for interviews, like reading common questions, taking coaching classes, or doing practice sessions with friends, usually don't work well. They take a lot of time, aren't very tailored to individual needs, and can be hard to rely on.

As web technologies and artificial intelligence have improved, automated systems for preparing for interviews have become a popular and effective option compared to older methods. Many current websites offer fixed sets of questions or video interviews that don't change based on how well a user is doing or what job they are applying for. These tools don't adjust to fit each person's needs or the specific requirements of different positions. Moreover, real-time evaluation and detailed feedback are often missing, which makes these systems less effective.

To solve these issues, this paper introduces PrepWise, an AI-powered tool that helps people prepare for and practice interviews in a way that feels like a real interview situation. The system lets users choose areas to interview in, practice questions that are specific to their role, send in their answers, and get automatic feedback. PrepWise uses AI methods along with a website to offer organized, flexible, and easy-to-use interview practice.

The key part of this work is creating a smart system that helps people prepare for interviews in a personalized way and keep improving their skills over time. The suggested system shows how using AI can help people get better prepared for their careers and improve their chances of doing well in job interviews.

2. LITERATURE REVIEW

The evolution of digital learning environments has led to the emergence of several tools designed to assist candidates in interview preparation. During the review of existing platforms, it was observed that many systems rely on predefined question banks and manual evaluation approaches, which offer limited adaptability to individual learning requirements. Such methods often fail to capture performance variations across different roles and experience levels.

Recent research demonstrates the potential of artificial intelligence and natural language processing techniques in automating interview-related processes. Some AI-enabled platforms provide preliminary evaluation of communication skills and domain knowledge; however, their functionality remains constrained by static question sets and restricted personalization capabilities. From an implementation perspective, this limitation reduces their effectiveness in practical recruitment preparation scenarios.

Moreover, although online learning systems are very helpful in terms of the overall skill improvement, according to our analysis, they hardly focus on the interview-specific assessment. Lack of adaptive difficulty adjustment and real time feedback systems may adversely affect the user engagement and the results in iterative learning.

Resting on these remarks, one may assume that the question of the unified solution, which involves individual interview simulation, automatic assessment, and the structured feedback, remains unexplored. The proposed PrepWise system is driven by this gap of research and will provide role-based practice sessions with automated feedback and analysis of performance.

3. PROBLEM STATEMENT

In the initial research conducted on the resources of interview preparation, it was established that candidates usually have a problem in getting structured and job-specific practice opportunities. Current solutions usually involve repositories of static questions that are manually graded and lead to a low level of personalization and lack of associations with specific levels of competence.

The other limitation that is witnessed is lack of automated evaluation and real-time feedback. In the absence of prompt feedback on performance, candidates might be unable to recognize what they need to work on, or they will not be able to notice progress in a consecutive practice session. Moreover, classic ways of mock interviews take quite a long time and might not be readily available to every user.

These results underline the importance of a versatile and smart interview preparation model that can offer adaptive practice spaces, computerized assessment and feedback. This type of system would be able to engage in the process of iterative learning and could help candidates prepare in general to the interview.

4. PROPOSED SYSTEM (PREPWISE)

PrepWise platform was created in order to curb the shortfalls that had been realized in the current interview preparation procedures. To achieve this, the system is set to simulate interviewing situations based on dynamic question generation and automated response assessment. PrepWise is a web-based application that is implemented and allows access across devices as well as scalability to many users.

On the implementation side of the matter, the platform will use basic features like user authentication, domain choice, and adjustable difficulty. Through the user interface, interview questions are created and displayed based on the parameters that have been selected. The evaluation module receives the submitted responses and evaluates their relevance and clarity before producing structured feedback. The system offers an adaptive environment by allowing skill improvement by means of incremental and repeated practice and performance tracking. The combination of AI-based assessment and web technologies enables the platform to provide a viable and effective method of interview preparation.

5. SYSTEM ARCHITECTURE

PrepWise architecture is the structural arrangement and interaction of the system components that will provide the services of interview preparation. The architecture has focused on modularity and scalability and also favored effective communication between the interface layer, application server and AI-based evaluation module. The general plan of the architecture is shown in Fig. 1.

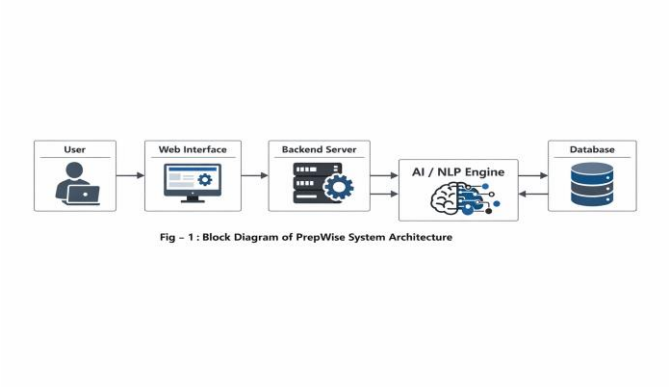


Fig – 1: Block Diagram of PrepWise System Architecture

The system has a number of functional modules:

User Interface Module:
It is a browser-based module where users can carry out tasks like registration, authentication, selecting the interview and entering their responses and visualizing the feedback. It is the interface that exists between the user and the platform.

Backend Server Module:
The backend part handles application-level logic and is in charge of the inter-module communication. It manages session, processing requests, delivery of questions and collection of responses besides maintaining reliability of the system.

AI Evaluation Engine:
This module will be involved in generating interview questions and automatically analysing the responses of users. Relevance, correctness, and clarity are the factors used in the evaluation process to generate structured feedback.

Database Module:
The database also keeps a continuous owning of user data, generated questions, received answers, and the results of the evaluation, which allows a measure of performance, and retrieval of past data. The synchronized work of these modules facilitates the smooth flow of work, with user

inputs are processed by the services of the back-end, being analyzed through AI mechanisms, and stored to be reused later before the results are displayed through the interface.

6. METHODOLOGY AND IMPLEMENTATION

PrepWise methodology provides a procedure that should be taken during an interview practice. The system embraces a methodical process of work, which allows automatic assessment and creation of feedback. Fig. 2 represents the process flow.

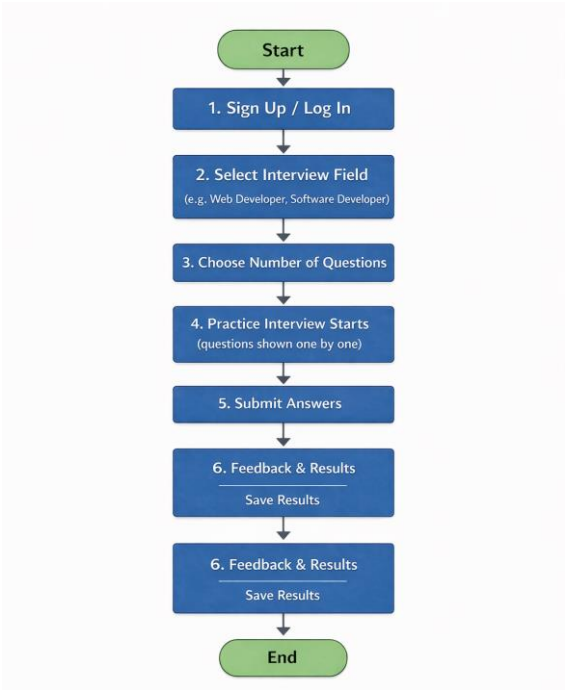


Fig – 2: Flowchart of Interview Preparation Process in PrepWise

First, user authentication is done to check access credentials. When they successfully log in, users define the parameters of an interview, such as domain and difficulty level. According to these inputs, the AI engine will dynamically generate pertinent interview questions.

The responses are entered by the users over the web interface and then the backend server is processed and sent to evaluation module. In the AI evaluation mechanism, the responses are evaluated based on predefined criteria including: contextual relevance, conceptual accuracy, and clarity of expression.

After evaluation, the structured feedback is created and it is stored in the database with the performance measures. The results are then shown to the user and a single practice is complete in terms of the interview. The methodology will aid in iterative learning as it allows repeating the practice and constantly monitoring the performance.

7. RESULTS AND DISCUSSION

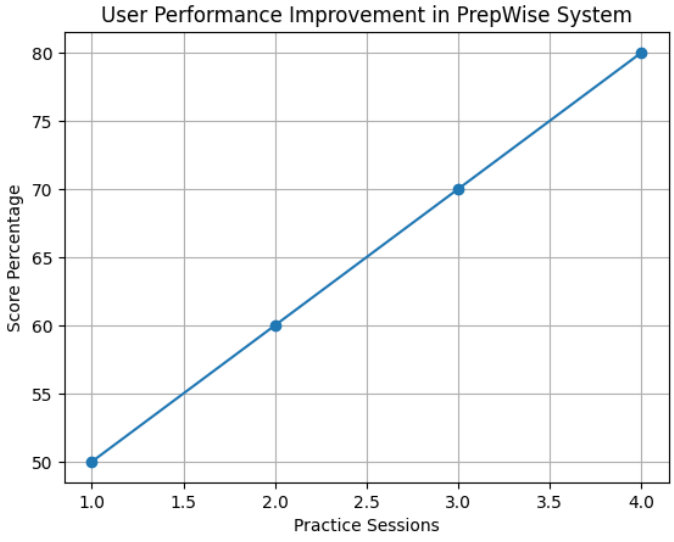
A system test was carried out to test the functional performance and interaction with the users in simulated interview sessions. It has been observed that the platform was able to create role specific questions and provide automated feedback in a uniform manner. The interface design helped to navigate the session and assist in the effective interaction.

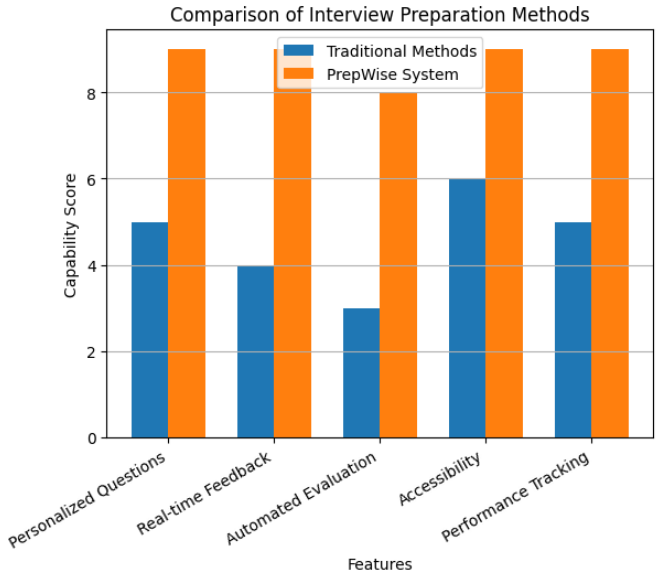
The analysis of user engagement showed that there was an increase in participation due to the benefits of real-time feedback and adjustive practice. Moreover, AI-based question generation was used to increase contextual matching, whereas the integration of databases was used to track the performance effectively.

These results indicate that the PrepWise site can offer a scalable and viable solution of structured interview preparation as well as automated skill evaluation.

Table 1: Comparison of Interview Preparation Methods

Feature	Traditional Methods	PrepWise System
Personalized Questions	NO	Yes
Real-time Feedback	No	Yes
Automated Evaluation	No	Yes
Accessibility	Limited	High
Performance Tracking	No	Yes





Tables and graphical analysis are used to present the results and determine the efficacy of the PrepWise system. Table 1 compares the conventional interview preparation techniques and the suggested system. PrepWise is seen to have superior personalization, real-time feedback, and automated evaluation.

The diagrammatic display shows that there was gradual improvement in user performance after repeated practice sessions. This implies that the system is efficient in preparing and learning users in a system that provides constant feedback and dynamic questioning.

8. CONCLUSION AND FUTURE SCOPE

In this paper, the authors introduced the concept of PrepWise a web-based interview preparation system that combines automated question generation and performance appraisal features. The system fills shortcomings of traditional preparation method offering role-specific practice and systematic feedback via an easy-to-use interface.
The experiment shows improved engagement and increased interview preparation with the help of the iterative practice and a constant feedback system. The platform minimizes on the use of manual evaluation and aids in systematic monitoring of performance.

The next step development can be aimed at integrating speech-based interview simulator, resume-based question generator, and advanced performance assessment analytics. Other upgrades (e.g., multilingual support and real-time mock interviews) can help to increase the applicability of the system and reinforce its purpose as a tool to prepare people to the work-related life.

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