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PrepAi: Interview Simulator

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Abstract **- PrepAi: Interview Simulator is an AI-powered tool that simulates real-world interview situations to improve job interview preparation. Targeted practice is difficult for many job seekers, which causes anxiety, inadequate preparation, and diminished confidence. In order to overcome this difficulty, PrepAi creates role-specific, AI-driven questions based on users' histories and professional objectives. The software gives customers thorough performance feedback, identifies their areas of strength and growth, and lets them monitor their development over time. By providing organised, on-demand interview practice, PrepAi enables people to hone their answers, boost their self-esteem, and increase their chances of landing a job.**

Keywords—Interview simulator, personalized interview practice, job interview challenges, performance feedback, skill development, AI-driven questions, job seeker support, realistic interview simulation..

I. INTRODUCTION

For job seekers hoping to land their chosen employment in today's fiercely competitive job market, good interview preparation is crucial. Hiring choices are frequently heavily influenced by the interview process, yet many candidates find it difficult to prepare because they lack organised practice, individualised feedback, and realistic interview scenarios. Customised and focused feedback is limited by traditional interview preparation techniques like reading frequently asked questions, going to coaching sessions, or practicing with peers. These traditional methods frequently fall short of mimicking the stress and uncertainty of actual interviews, leaving applicants unprepared for unforeseen enquiries and without the self-assurance necessary to perform successfully.

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The advent of machine learning (ML) and artificial intelligence (AI) technology has created new chances to improve interview readiness. By customising questions according to a candidate's résumé, abilities, and career goals, AI-driven mock interview platforms may offer a more efficient and customised experience. These systems can improve applicants' overall preparedness by simulating dynamic interview circumstances, analysing user reactions, and providing constructive feedback by utilising AI. In order to overcome these obstacles, PrepAi: Interview Simulator provides an AI-powered solution that creates personalised interview questions and analyses user replies with comprehensive insights.

PrepAi's main goal is to close the gap in conventional interview preparation by offering a platform that is realistic, interactive, and feedback-driven. The system makes use of Drizzle ORM for effective database administration, Next.js for a user-friendly and responsive frontend interface, and Gemini AI to create role-specific interview questions on the fly. Together, these technologies produce a powerful mock interview setting where users may rehearse responding to AI-generated questions and gain thorough performance evaluations. PrepAi guarantees that users participate in hands-on, experience-based learning by mimicking authentic interview situations, which greatly improves their critical thinking, communication, and problem-solving abilities.

II. LITERATURE REVIEW

The development of AI-powered tools for interview preparation has fundamentally changed how job seekers hone their interviewing techniques. Natural language processing (NLP), machine learning, and speech recognition technologies are used by a number of AI-based platforms, like HireVue and MynTrust, to evaluate applicant replies and offer feedback. Though capable, these systems mostly rely on textual inputs and frequently lack sophisticated AI integration for real-time verbal response or personalised question formulation. Current methods do not offer comprehensive, individualised insights based on a person's résumé or particular work function; instead, they are largely intended to evaluate fundamental communication abilities.

The low degree of customisation offered by these systems is a serious drawback. A generic experience that ignores unique learning demands is the result of many platforms' inability to let users customise their interview circumstances. The feedback given is sometimes cursory, providing generic remarks or number ratings without specific, doable suggestions for enhancement. Furthermore, real-time verbal feedback is not

completely supported by the majority of AI-powered mock interview systems now available, which makes it challenging for users to acquire the critical speaking and articulation skills required for actual interviews. The inability to integrate with job search tools is another major disadvantage, since it hinders candidates' ability to effectively manage their job applications and follow their interview progress.

Table 2.1: Summary of Existing AI Mock Interview Systems

Paper	Year	Technology	Contribution
AI Mock-Interview Platform for Performance Analysis	2022	AI-based performance assessment	Provides structured feedback to improve interview skills
AI-Based Mock Interview Evaluator	2023	AI with emotion and confidence analysis	Enhances self-awareness by assessing confidence and emotional responses
AI Mock Interview Simulator with Pose-Based Interaction	2024	AI, Pose Recognition	Simulates real interviews by analyzing body language and gestures
Skillup Bot: AI-Driven Mock Interview System	2024	AI, NLP	Generates tailored practice interviews and job-specific feedback
AI-Based Behavioral Interview Analyst	2024	AI-based behavioral assessment	Evaluates behavioral traits and provides improvement suggestions

III.PROPOSED METHODOLOGY

In order to help users improve their interviewing skills through realistic practice sessions, this project focusses on creating an AI-powered mock interview simulator. Using Next.js for the front end and Drizzle ORM for database management, the application provides a structured approach to interview preparation; Gemini AI analyses responses and provides real-time feedback; clerk authentication ensures secure user access; users can create and customise mock interviews, record their responses

3.1 Project Initialization

- Utilise Next.js to set up the front-end foundation for a smooth and engaging user experience.
- Create a structured connection with the database by integrating Drizzle ORM.
- Establish the database schema to effectively store information pertaining to interviews.
- Assure a scalable and reliable system to manage interview sims and user interactions.

3.2. User Authentication

- Integrate Clerk to secure user authentication, allowing only registered users to access the platform.
- Implement user sign-up, login, and session management to provide account security and personalised access.
- To prevent unauthorised access, ensure that user credentials and session information are stored securely
- Ensure a smooth authentication sequence for a better user experience, including social/email login choices

3.3 Mock Interview Creation

- Provide a user-friendly interface so that users can easily construct and set up simulated interviews...
- Allow users to choose among AI-generated questions based on their ability level and enter their own questions.
- Create a structured database with Drizzle ORM to store interview questions and setups.
- Permit users to alter the interview's format and level of difficulty according to their preferred employment role.

3.4 Interview Process

- Depending on the user's preferences and profile, the saved interview questions are dynamically retrieved.
- Ask questions in an engaging, organised manner to replicate an actual interview setting.
- Give consumers the option to record their voice or text comments for a more thorough practice session.
- Make that users may move between questions, pause, or re-answer questions as needed during real-time engagement.

3.5 Feedback Mechanism

- Use Gemini AI to examine user feedback and offer a thorough assessment.
- Provide immediate comments on things like the relevancy, confidence, and clarity of the response.
- Make tailored recommendations for improvement based on the strengths and problems that have been
- Provide thorough feedback reports so users may

monitor their development and hone their abilities.

3.6 Review the Interview Process

- Give users the option to examine their answers and AI-generated comments to pinpoint important areas for development
- Keep records of previous interviews so users may see their development throughout several sessions.
- By displaying performance patterns over time, you may offer comparison insights that support ongoing progress.

IV.RESULT AND DISCUSSION.

1. Performance Evaluation

- Although there were occasionally misunderstandings of sophisticated replies, AI-generated questions were relevant since they matched user profiles effectively.
- The analytics dashboard let users track their progress, and many reported feeling more confident and having improved their skills.
- Real-time feedback improved the whole experience, and the user-friendly UI/UX made navigating easy.

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By fusing results from all three modules, the system significantly reduced false alarms and improved decision-making accuracy compared to using a single detection method.

2. Advantages of the System

- Personalised Interview Experience: AI ensures pertinent and focused preparation by creating role-specific questions based on user profiles.
- Real-Time Feedback: Users may quickly determine their strengths and areas for development by analysing their replies.
- Progress Tracking: Users may keep an eye on their performance over time with the analytics dashboard.
- Accessible and Flexible: Users may practise at any time and from any location, which facilitates interview preparation.

3. Challenges and Limitations

- Integration Complexity: Using Next.js, React, Drizzle ORM, Gemini AI, and Clerk together might cause compatibility issues and need knowledge of several frameworks for smooth operation.
- Scalability Issues: Managing real-time interview sessions, data storage, and performance optimisation gets more difficult as the user base increases, which might cause system slowdowns.
- AI Limitations: When evaluating nonverbal clues, soft skills, and domain-specific expertise, in particular, the AI may find it difficult to completely comprehend human replies, which might result in erroneous feedback.
- Internet Dependency: Because PrepAi is a cloud-based solution, it requires a steady internet connection, which restricts its usability for users in places with inadequate connectivity.

4. Future Improvements

- Multi-Language Support: To reach a wider audience and make the app more usable for non-native English users, provide support for various languages.
- Integration with Job Portals: After users finish their practice interviews, work with job portals or services to show them job opportunities that fit their desired jobs and skill set.
- Video and Audio Analysis: For thorough feedback, include tools that examine users' body language, speech patterns, and confidence levels during simulated interviews..

V. CONCLUSION

The creation of PrepAi: Interview Simulator demonstrates how AI-powered solutions may improve interview preparation for job interviews. The platform offers customers a customised and engaging experience by including AI-generated questions, real-time feedback, and performance monitoring. The system is a useful tool for job searchers since it can analyse replies, mimic real-world interview situations, and adjust to different skill levels.

Even though the program has shown great usability and engagement, its efficacy may be increased with more advancements in speech-to-text processing, behavioural analysis, and AI accuracy. All things considered, PrepAi gives customers systematic, data-driven interview preparation, which boosts their confidence and increases their chances of landing a job.

VI. REFERENCES

[1] Chou, Y. C. (2022). AI-Powered Mock Interview Platform for Performance Assessment**.**

[2] Manda, R. (2023). AI-Based Mock Interview Evaluator Using Emotion and Confidence Classification**.**

[3] Rai, S., & Miranda, A. (2024). Skillup Bot: AI-Driven Mock Interview System. *IRJET*

[4] Kolpe, S. (2024). Behavioral Recognition in AI-Based Mock Interview Simulators.

[5] Jadhav, B. B. (2024). Implementation and Study of AI-Driven Mock Interview Simulators with Pose-Based Interaction.