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## International Journal of Multidisciplinary Research in Science, Engineering and Technology (IJMRSET)

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# INTELLIMOCK TALK USING ARTIFICIAL INTELLIGENCE

**Gunasekaran K, Anup Shetty**

Assistant Professor, Department of MCA, AMC Engineering College, Bengaluru, India

Student, Department of MCA, AMC Engineering College, Bengaluru, India

**ABSTRACT:** An AI-powered online tool called IntelliMock Talk was created to improve candidate assessment and interview preparation. Through the creation of domain-specific questions and the real-time recording of user responses, the platform simulates technical interviews. It offers immediate feedback on a variety of assessment criteria, such as technical proficiency, communication, problem-solving abilities, and overall experience, using AI, which was developed using Next.js, Tailwind CSS, and Supabase, provides a user-friendly and responsive interface along with safe authentication through Google OAuth. Shareable dynamic interview pages, candidate management, automated feedback generation, and interview scheduling are some of its features. The system serves professionals training for software roles, companies looking to test automated candidate assessment, and students getting ready for placements. With the help of intelligent evaluation algorithms and contemporary web technologies, IntelliMock Talk expedites the interview process and provides recruiters and candidates with a quick, impartial, and scalable solution.

## I. INTRODUCTION

Career prospects are greatly influenced by interviews, but both recruiters and candidates may find it difficult to adequately prepare for them. Traditional mock interviews are less scalable and have inconsistent evaluations since they frequently demand a large investment of time, energy, and human resources. In order to overcome these obstacles, IntelliMock Talk offers a web-based, AI-powered platform that mimics actual technical interviews. Users can choose a skill set or domain, and the system will automatically come up with questions that are pertinent. AI evaluates the responses during the session, and immediate feedback is given on important performance metrics like technical proficiency, communication skills, and problem-solving ability. The platform, which was created with Next.js, Tailwind CSS, and Supabase, guarantees a contemporary, responsive design and safe authentication through Google OAuth. In-depth performance summaries, shareable interview links, candidate management, and interview scheduling are among its other features.

## II. LITERATURE SYRVEY

A number of important research areas, such as multimodal behavioral analysis, automated question generation, and automated answer scoring, are expanded upon in the field of AI-powered interview simulation. From basic rule-based templates to sophisticated transformer-based models, automatic question generation has advanced to the point where it can now generate context-aware, domain-specific questions that complement a candidate's skill set. For realistic and flexible interview simulations, this feature is essential. Automated scoring systems evaluate candidate responses based on a variety of criteria, including technical accuracy, communication abilities, and problem-solving strategies, using machine learning and natural language processing techniques. By offering consistent, impartial, and understandable feedback, these systems seek to mimic the assessments made by human evaluators. Furthermore, studies on speech and multimodal features, such as linguistic, nonverbal, and acoustic cues, have shown that incorporating these signals can enhance the evaluation of emotional states, confidence, and fluency. However, this presents issues with data quality, normalization, and privacy.

## EXISTING\_SYSTEM

Through automated or semi-automated methods, a number of current platforms and tools seek to assist with interview preparation and candidate evaluation. The main focus of well-known services like HackerRank, LeetCode, and Codility is on technical assessments and coding challenges. These services provide environments where candidates solve programming problems and get automatic scoring. Technical skill evaluation is where these platforms shine, but they typically lack full interview simulation features like dynamic feedback, conversational Q&A, and communication





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assessment. Although they offer realistic interaction, other tools such as Pramp and Interviewing.io offer mock interview environments with live human interviewers. However, because they rely on human availability, they are less scalable and resource-intensive. This makes them inaccessible for widespread organizational use or frequent practice.

AI-driven analysis of verbal and nonverbal cues is incorporated into video interviews on some new AI-powered interview platforms, like HireVue and myInterview. However, rather than offering thorough, helpful criticism to help candidates advance over time, these systems frequently concentrate on screening candidates for employers

### PROPOSED SYSTEM

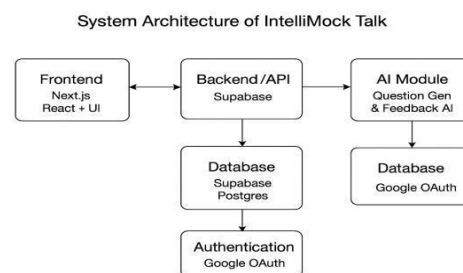
In order to overcome the drawbacks of competing solutions, IntelliMock Talk is a comprehensive AI-driven interview simulation platform that seamlessly integrates a number of essential features. In order to enable dynamic, realistic mock interviews without the need for a human interviewer, the system automatically creates technical and behavioral interview questions based on the user's chosen domain or skill set.

IntelliMock Talk records candidate responses during the interview and uses AI algorithms to evaluate them based on a variety of criteria, including technical precision, clarity of communication, problem-solving abilities, and relevant experience. Candidates receive immediate, thorough feedback from this multifaceted assessment to help them recognize their areas of strength and growth.

### III. SYSTEM ARCHITECTURE

The Frontend, Backend, and Database & Services are the three main layers that make up the IntelliMock Talk system's contemporary web application architecture. The frontend is in charge of managing user interactions, rendering the user interface, and interacting with backend APIs. It is constructed using the Next.js React framework and styled with Tailwind CSS and ShadCN UI. It offers crucial functions like dynamic feedback display, real-time interview sessions, interview scheduling, and secure authentication. Supabase, which provides a managed PostgreSQL database, real-time data capabilities, and authentication services like Google OAuth, powers the backend.

The main business logic is implemented by this layer, which also handles candidate data, conducts interviews, integrates AI feedback, and initiates AI-driven question creation. Depending on the user's selected skill set, the AI module—which can be implemented as serverless functions or external APIs—dynamically creates domain-specific interview questions. It then uses natural language processing (NLP) and machine learning models to evaluate candidate responses and generate multi-parameter feedback scores and comments.



### IV. METHODOLOGY

The AI-Powered Mock Interview System was developed using a methodical approach to guarantee a platform that is effective, safe, and easy to use. The first step in the process is requirement analysis, which identifies the system's functional and non-functional requirements, including essential features like responsive design, AI-based feedback, Google OAuth authentication. The architecture is planned during the system design phase using Next.js for the frontend, Supabase for database management and authentication, and Google OAuth for secure login. Tailwind CSS and ShadCN UI are used to create the user interface. During the implementation phase, the frontend is constructed using Next.js, and Supabase is integrated for database operations, authentication, and AI evaluation modules that gauge a candidate's performance in areas like communication, problem-solving, and technical proficiency.



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### V. DESIGN AND IMPLEMENTATION

The goal of IntelliMock Talk's design is to provide a user-friendly, safe, and scalable AI-powered mock interviewing platform. The Frontend, Backend/API Layer, and Database & Services are the three main layers that make up the system's structure. Real-time interview sessions, candidate management, interview scheduling, authentication, and feedback display are all made possible by the frontend, which was created with Next.js and styled with Tailwind CSS and ShadCN UI. Supabase, which powers the backend, provides real-time data handling capabilities, a managed PostgreSQL database, and authentication via Google OAuth. A machine learning and natural language processing (NLP) module creates domain-specific interview questions on the fly and assesses candidates' answers based on a variety of criteria, including technical proficiency, communication, and problem-solving abilities.

Creating the database schema in Supabase to hold user profiles, candidate records, interview sessions, questions, and feedback reports was the first step in the implementation process. After that, the frontend was created in a modular fashion, incorporating Supabase Auth with secure authentication flows. In order to manage interview sessions, generate AI questions, and analyze feedback, serverless functions and API routes were established. Real-time processing of user responses was made possible by the implementation of AI evaluation logic, which produced feedback that was immediately displayed on the frontend and stored in the database.

### VI. OUTCOME OF RESEARCH

An AI-powered mock interview platform that integrates real-time interaction, intelligent question generation, and automated performance evaluation has been successfully developed as a result of the research done for IntelliMock Talk. The system provides candidates with instant, multi-parameter feedback and domain-specific interview questions by integrating Next.js, Supabase, and AI-driven NLP models. In comparison to conventional manual methods, the study confirmed that AI-based assessments can offer unbiased, consistent, and accurate evaluations. Additionally, they can scale for large numbers of users. The platform guarantees a polished and easy-to-use experience by supporting secure Google OAuth authentication, smooth scheduling, and real-time interview monitoring.

intelligent technology in practical applications. Furthermore, testing verified that the system architecture is scalable, reliable, and able to accommodate upcoming improvements like adaptive question difficulty and video-based interviews. Overall, the study's findings show that IntelliMock Talk can greatly increase the effectiveness, accessibility, and equity of interview preparation.

### VII. RESULTS AND DISCUSSION

The outcomes of the IntelliMock Talk project show how well ChatGPT can deliver a smooth, AI-powered mock interview experience with secure authentication, real-time scheduling, and automated feedback, the company stated. A responsive and effective system was produced by integrating Next.js for the frontend, Supabase for database administration and authentication, and AI modules for question creation and response analysis. In testing, the platform was able to create domain-specific interview questions, record candidate answers, and generate comprehensive feedback reports that closely matched expert assessments in areas like experience, technical skills, communication, and problem-solving. While the user-friendly interface made it simple for users to manage candidates, schedule interviews, and obtain feedback, the real-time synchronization guaranteed seamless interview sessions.

### VIII. CONCLUSION

To sum up, IntelliMock Talk is a cutting-edge and successful AI-powered mock interview tool that improves candidates' confidence and readiness for actual interviews. The system provides a smooth, interactive, and customized interview experience by combining Next.js for a dynamic and captivating frontend, Supabase for safe authentication and data administration, and AI modules for clever question creation and feedback analysis. Users can effectively identify their strengths and areas for improvement thanks to the platform's real-time evaluations and structured feedback features. It is a useful tool for professionals and learners alike because of its scalable architecture and cutting-edge tech stack, which allow for future improvements like support for additional domains and sophisticated AI-driven analytics.



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