iJRASET
International Journal For Research in Applied Science and Engineering Technology

INTERNATIONAL JOURNAL FOR RESEARCH

IN APPLIED SCIENCE & ENGINEERING TECHNOLOGY

Volume: 13 **Issue:** III **Month of publication:** March 2025

DOI: https://doi.org/10.22214/ijraset.2025.67734

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International Journal for Research in Applied Science & Engineering Technology (IJRASET)
ISSN: 2321-9653; IC Value: 45.98; SJ Impact Factor: 7.538
Volume 13 Issue III Mar 2025- Available at www.ijraset.com

AI Driven Placement Preparation Platform

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Abstract: ***The AIDriven Placement Preparation platform was built to support users in their placement preparation through a set of essential capabilities designed to enhance their abilities. Users can use this platform to take mock interviews which examines their face expressions before delivering individual assessment data for enhancing interview skills. The platform includes a communication improvement module offering activities which involve sentence readingand sentence rearrangement as well as target activities for listening and speaking skills development and also provides with accuracy ratings that help them measure their performance. Through their job portal admins can publish career positions which simplifies job searchfor users. Users can find previous placement questionsfor learning purposes while mock aptitude and reasoning tests with adjustable timer allow test simulation characteristics. This project creates opportunities for users to strengthen their confidence in communication and enhance their problem-solving abilities so they become ready for placement activities.***
Keywords: Gemini (AI tool), Machine Learning, React.js, Natural Language Processing.

I. INTRODUCTION

The AIDriven Placement Preparation project exists as the system was developed specifically forplacement preparation assistance. Users experience multiple difficulties which include lack of confidence, poor communication skills, and limited access to reliable placement resources. The project addresses multiple issues affecting user placement preparation. users obtain solutions through tools and structured learning modules supported by AI technology.

The key characteristic of this platform features an AI-enabled mock interview system that evaluates user facial movements during simulated interviews. This system monitors performance indicators which reveal nervousness together with stress or confidence thus delivering bespoke insight to users about enhancing their interview abilities. The Mock Interview system also provides rating for the answers that the user had answered. Users gain a decrease in interview stress and increased self-assurance by using this feature.

Users can improve their communication abilities by using the platform's features that require interactive reading exercises and sentence rearranging and conversational practice. A variety of activities on the platform enable users to develop their speaking fluency together with pronunciation skills and clear delivery. Users can monitor their skills development through system feedback combined with accuracy evaluation scores which helps their skills grow with time.

The system includes a functionality that allows administrators to add available positions on a job portal and enables users to search for appropriate job opportunities and submit their applications. Through this system users maintain effortless access to available job postings which eliminates their need to browse different websites.

The platform contains previous placement questions in the aptitude and reasoning mock tests which assist users in exam preparation for written assessments and technical tests. Users gain two advantages by using tailored timers to practice their solutions while simulating actual exams which develops their time management capabilities and problem-solving abilities.After completion of the test the user will get the score of the test including correct answers and the user's answer. This platform enables users to build self-assurance while developing their conversation abilities hence improving their opportunity to obtain their chosen position.

II. PROBLEM STATEMENT

The problem faced by users during campus placements is the high level of stress, anxiety, and lack of preparation for interviews. Traditional systems offer limited personalized feedback, often neglecting non-verbal cues like facial expressions and emotional stress that are crucial during interviews. Communication skills, including speaking and listening, are often inadequately addressed in existing systems. Additionally, users lack realistic exposure to placement questions and the ability to practice under exam-like conditions. There is also a gap in integrating job opportunities with preparation, leaving users without a unified platform for both practice and application. These challenges highlight the need for a comprehensive, interactive solution that not only prepares users for technical aspects but also enhances their communication, emotional readiness, and confidence.

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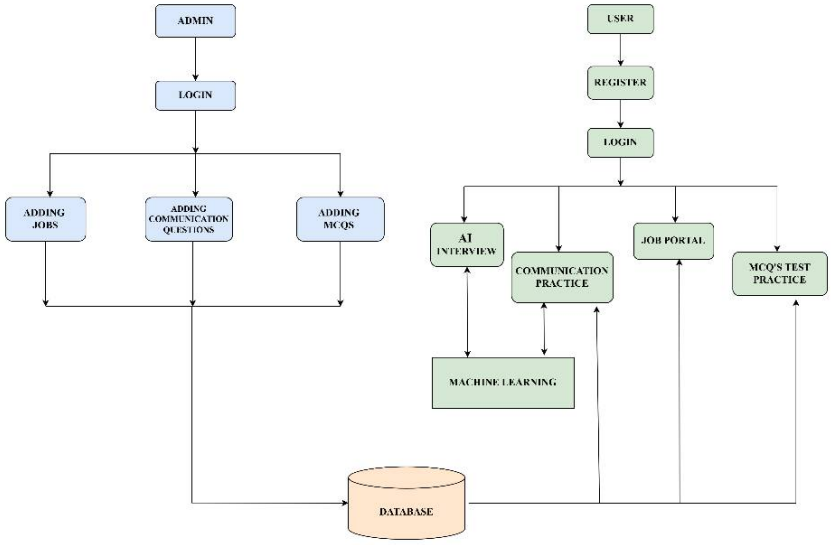
III. PROPOSED SYSTEM

This system establishes a complete artificial intelligence solution that delivers placement preparation services for campuses. The platform utilizes an AI technology to assess user facial emotional signals during mock interviews thus it helps identify nervousness before giving tailored feedback to enhance emotional skills for better interview performance. The communication improvement module uses interactive activities for reading aloud combined with sentence shuffling and listening and speaking practice sessions that monitor user progress through scoring systems. A centralized admin job portal provides administrators with an option to post job vacancies which users can both see and submit their applications through. Users can use the system to practice mock tests which include previous placement questions and allow timer customization for real exam simulation according to their specific needs. Users can take advantage of complete placement preparation through a single platform which delivers practice with feedback and positions in the workplace.

IV. WORKING

A. Block Diagram



B. Admin

Through its Admin Module administrators obtain access to a central system which enables efficient handling of platform management tasks..

The admin can add, update, or delete:

1) Placement-related MCQs and mock test questions for technical and aptitude rounds.
2) Communication practice exercises to practice in various difficulties.
3) Job listings for off-campus opportunities, that helps users to apply jobs in the same portal
4) Responds to the user's queries.

C. Mock Interview

1) Question Generation:

The AI tool Gemini produces questions according to the topics which users select. The questions generated by Gemmia enable users to concentrate on specific areas of practice through responding to these questions.

2) Video Capture and Analysis:

Users submit their video recordings to the system for monitoring face expressions and complete behaviour. After video recording Machine Learning operates to detect faces along with performing analysis on them. It Identifies human emotions. The detailed facial landmark detection system generates information about user facial movements and expressions which reveals their emotional states regarding confidence and stress levels and neutral reactions.

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3) Feedback:

Users benefit from machine learning analysis which provides an evaluation of their facial expressions and score reports for their answers. The users receive performance feedback through machine learning tools which helps them learn to develop better communication abilities and response quality.

D. Communication

1) Audio Capture and Analysis:

The communication module records audio input from the user into text which is analyzed through a machine learning model for accuracy assessment. This analysis is done in two ways: one method compares the recorded sentence with the original to calculate how closely they match, which is used for activities like Listening, Reading, and Jumbled Sentences; the other method analyzes the meaning of the recorded text, correcting grammar mistakes and evaluating how well the intended message is conveyed, which is used for the Story Retelling activity. Both approaches provide feedback to help users improve their communication skills.

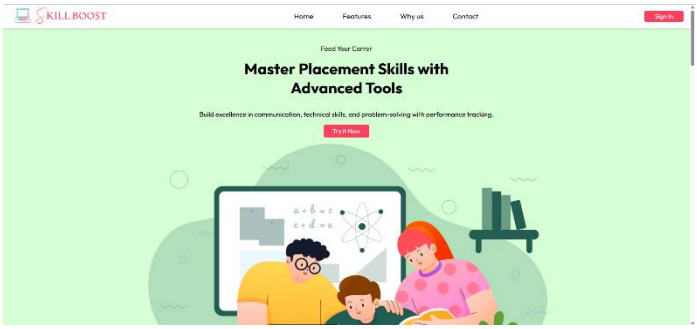
E. MCQ Mock Test

Users begin the application by choosing from a Topic list containing Aptitude and Reasoning among others before selecting particular subtopics. Users have control over setting time limits during their tests which duplicates an examination format to develop better time management abilities. The questioning process reveals each test problem one at a time to users who can make their selections. Users see their performance breakdown including correct answers after sending their test through the system. The report displays both the total score and all correct answers while helping users determine their weak points in their tested areas.

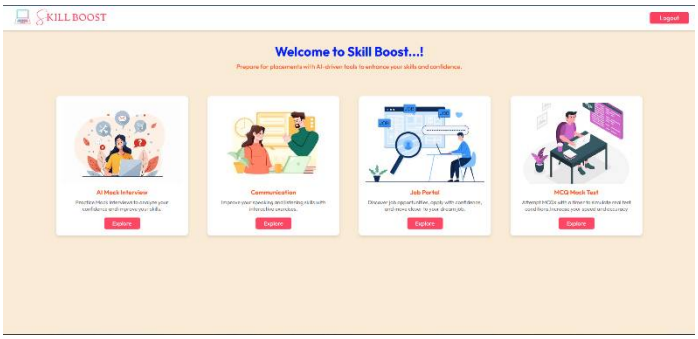
F. Job Portal

Through the job portal module users obtain access to job openings submitted by the admin. Users can explore listed job opportunities which they can immediately submit their applications through the platform. The convenient job application process through this feature gives users simple access to open positions and enables them to submit their applications whenever it suits them for better placement outcomes.

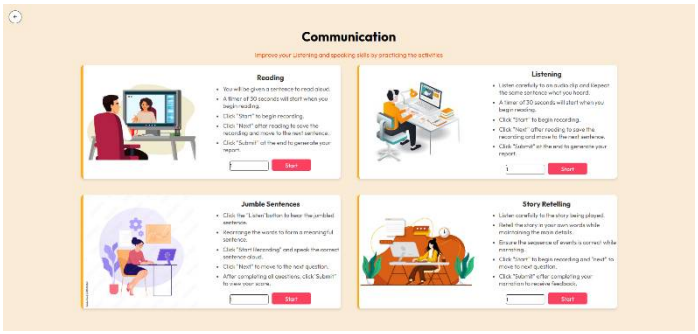
G. Output



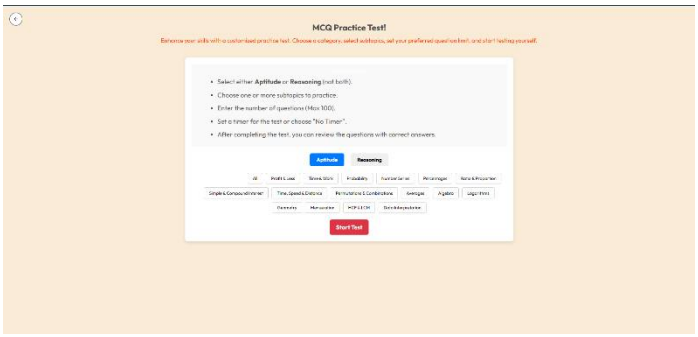
Home page



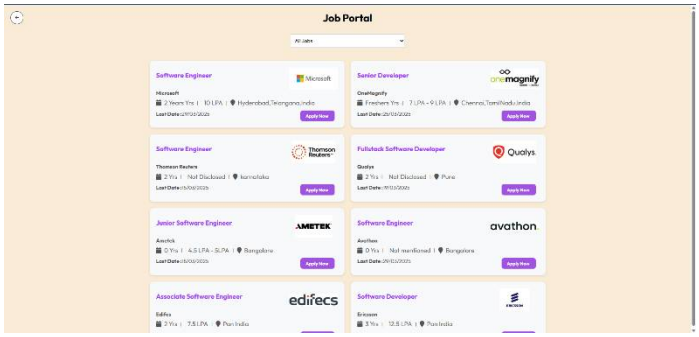
User page



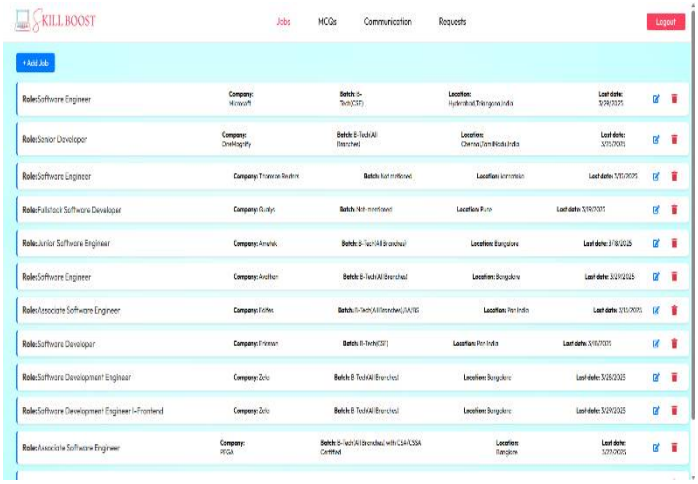
Communication



MCQ Mock Test



Job portal



Admin Portal

V. CONCLUSION

The platform provides all necessary resources for campus placement preparation through its integration of AI and Machine Learning technology along with interactive tools. This system delivers tools for enhancing communication abilities together with mock interview practice which comes with personal feedback for enhanced performance metrics. Through this platform users can handle job applications as well as search for careers aligned with their abilities and professional targets. MCQ tests in this system replicate actual placement examinations to help users enhance their test-time decisions while building quick responses resulting in better exam outcomes.

VI. FUTURE ENHANCEMENTS

The future improvement of this preparatory platform should include enhancing the mock interview feature with advanced voice AI for feedback purposes. The system would use real-time speech evaluation to assess user vocal sounds while displaying performance metrics regarding tone quality along with pitch level and speed control and voice clarity measures. The system analyzes speech data with sentiment analysis and natural language processing technology to display user improvements in communication that include reducing verbal unneeded words and better language telling and pronunciation. The system update will create individualized interview preparation that enhances user proficiency in speech abilities.

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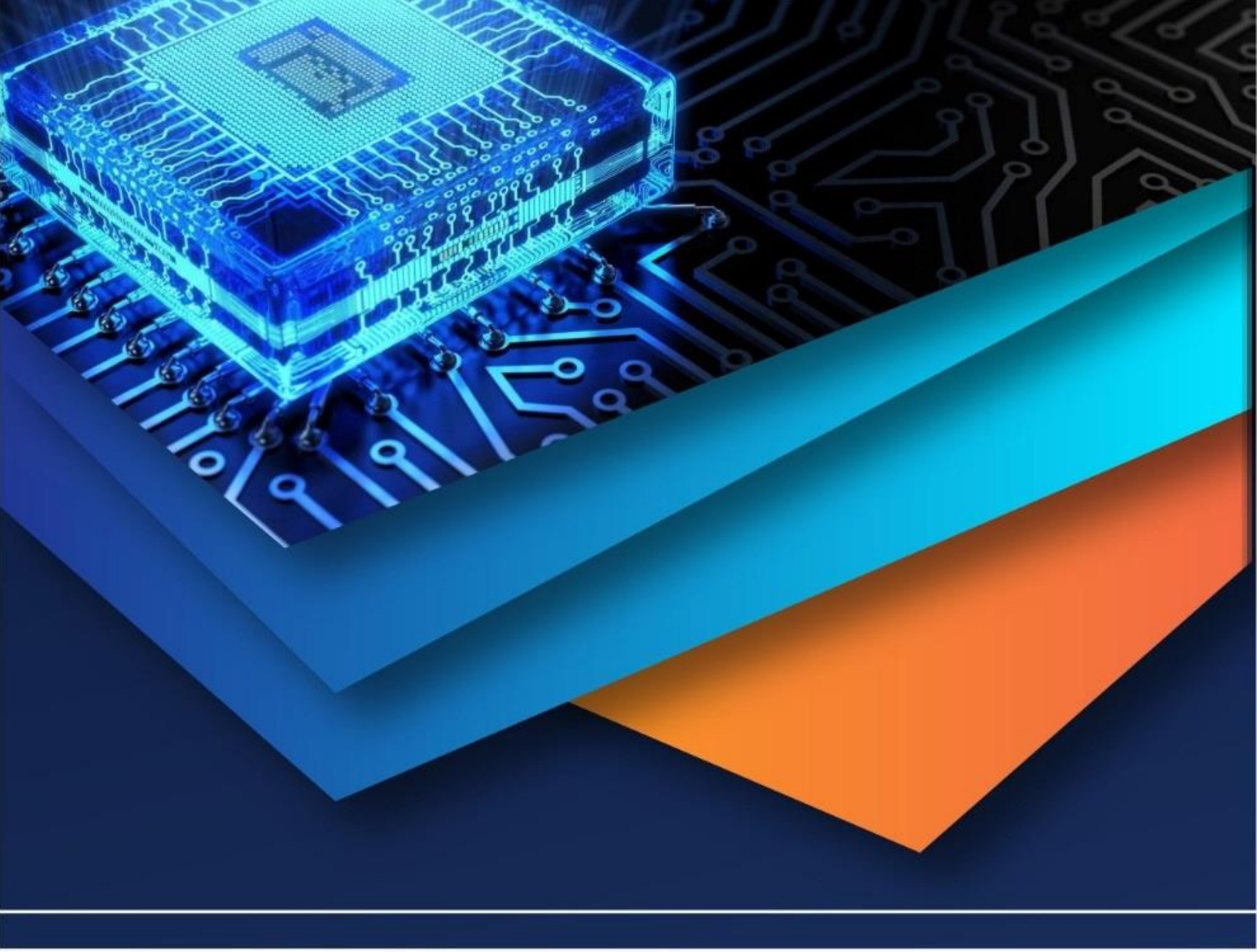

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