

DRIVE: Placement Drive Rehearsal Interview Virtual Environment

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Abstract- This paper presents DRIVE, a Placement Drive Rehearsal Interview Virtual Environment designed to simulate real campus recruitment processes. The system enables students to practice complete placement workflows by integrating aptitude tests, technical interviews, coding assessments, and HR interview preparation into a single platform.

The system allows users to enter a company name, upon which it analyzes recruitment patterns and generates a structured hiring process. A competition-based elimination model is implemented using dynamic cut-off values derived from simulated candidate pools. AI-driven techniques are used to provide performance analysis and feedback.

Unlike traditional mock interview systems, DRIVE focuses on full placement realism by incorporating time constraints, elimination stages, and performance pressure. The system aims to improve placement readiness, confidence, and performance of students.

Keywords: Placement Simulation, Artificial Intelligence, Recruitment Workflow, Web Application, Interview System

I. INTRODUCTION

Campus placement plays a crucial role in shaping a student's career. However, many students lack practical exposure to real recruitment processes. Existing preparation methods focus on solving questions or attending isolated interviews, which do not simulate real placement drives.

In real-world recruitment, candidates go through multiple rounds such as aptitude tests, technical interviews, coding rounds, and HR interviews. Each stage evaluates different skills and includes time pressure and elimination criteria.

The DRIVE system is developed to provide a realistic placement rehearsal environment. It allows students to experience complete placement workflows in a structured manner. By simulating real recruitment processes, the system helps students improve their confidence and performance.

II. LITERATURE SURVEY

Several research works have focused on improving inter-view preparation using AI and web technologies.

AI-powered interview systems use Natural Language Processing to evaluate candidate responses and generate feedback. These systems improve communication and behavioral assessment but are limited to HR rounds.

Online exam systems use web scraping to generate question banks and provide automated evaluation. These systems are efficient but limited to multiple-choice questions and lack personalization.

Automated grading frameworks using Large Language Models evaluate coding solutions and provide feedback. These systems improve evaluation accuracy but depend on external APIs and lack integration with placement workflows.

Question generation systems use NLP techniques to create adaptive and domain-specific questions. However, they do not simulate full recruitment processes.

AI-based mock interview systems provide multi-stage evaluation but are limited to single-candidate scenarios and lack competition-based selection.

Thus, existing systems focus on individual components, whereas DRIVE integrates all placement stages into a single platform.

III. EXISTING SYSTEM

Existing systems mainly focus on virtual interview platforms and online practice tools. These systems are limited in functionality and do not simulate full placement drives.

Most systems focus on single-round interviews, usually HR or aptitude-based assessments. Evaluation is restricted to speech analysis or simple scoring mechanisms.

Recruitment stages are not connected as a continuous process, and there is no competition-based evaluation. Questions are generic and not tailored to specific companies.

A. Drawbacks

- Single-round focus without multi-stage integration
- No competition or cut-off based elimination
- Limited evaluation scope
- Lack of company-specific customization
- No continuous recruitment workflow simulation

IV. PROPOSED SYSTEM

The DRIVE system provides a complete placement drive simulation environment.

The system allows users to enter a company name and auto-matically generates recruitment workflows based on available data. It supports multiple rounds including aptitude, technical, coding, and HR interviews.

A competition-based evaluation model is implemented using dynamic cut-offs. Candidate progression depends on performance relative to other candidates.

AI-driven feedback analyzes performance and provides improvement suggestions. The system also incorporates time constraints and elimination stages to replicate real placement conditions.

The system conducts multiple rounds including aptitude, technical, coding, and HR interviews. Each round is time-bound and designed to simulate real placement conditions.

3. Evaluation and Cut-Off Management

The system evaluates candidate performance after each round. Scores are compared with dynamic cut-off values to determine eligibility. Candidates are either selected or eliminated based on performance.

4. AI-Based Feedback and Readiness Assessment

The system analyzes performance data and provides personalized feedback. It identifies strengths and weaknesses and suggests improvements. Successful candidates receive readiness assessment.

VI. RESULTS AND DISCUSSION

The DRIVE system was successfully implemented and tested. The system simulated real placement drives with multiple rounds and dynamic evaluation.

Users were able to experience realistic placement workflows and receive immediate feedback. The evaluation system accurately applied cut-offs and determined candidate progression.



Fig. 1. Data Flow Diagram

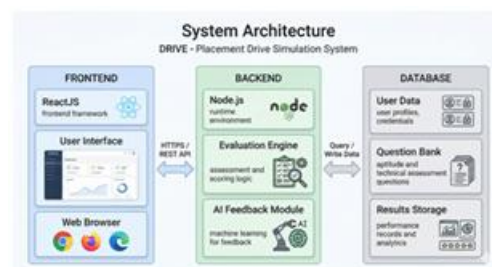


Fig. 2. System Architecture

V. SYSTEM MODULES

The DRIVE system consists of the following modules:

1. Drive Initialization and Configuration

Users enter the company name to initiate the process. The system generates recruitment rounds automatically based on company patterns. Users can modify configurations such as round types and difficulty levels.

2. Placement Drive Simulation

The AI-based feedback system provided useful insights for improving performance. The user interface was simple and easy to navigate, enhancing user experience.

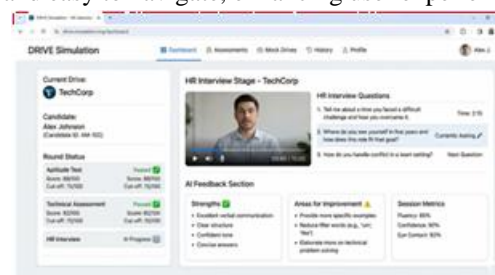


Fig. 3. Sample Output

VII. CONCLUSION

The DRIVE system successfully simulates real-world placement drives and provides students with a complete recruitment experience. It integrates multiple rounds into a single platform and uses competition-based evaluation to enhance realism.

The system improves placement readiness, confidence, and performance. AI-driven feedback helps students identify strengths and areas for improvement.

Future enhancements include advanced AI evaluation, adaptive difficulty mechanisms, real-time competition, and mobile application development.

REFERENCES

- [1] GS Rao et al., "AI Powered Virtual Job Interview Simulator Using NLP," IEEE ICOEI, 2025.
- [2] Shreyas Varadkar et al., "Online Exam Generation System Using Web Scraping," IJRAR, 2024.
- [3] EQ Tseng et al., "CodEv: Automated Grading Framework Using LLMs," IEEE, 2024.
- [4] KP Murshida et al., "Automated Question Generation and Evaluation System," IEEE, 2024.
- [5] Radha Shirbhate et al., "AI-Based Mock Interview Simulation System," JETIR, 2025.